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AUTHOR Belcher, Marcia J.
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ABSTRACT

In 1991, a study was conducted of Miami-Dade Community College students' classroom experiences. The process involved randomly selecting one section for each full-time faculty member and administering the surveys prior to the final course withdrawal date. Surveys were returned from 640 sections (84% of those initially selected), and responses were received from 12,729 students. After tabulation, the results were analyzed to determine the reliability and validity of the initial survey instrument. Findings included the following: (1) at least 95% of the students thought their instructors were prepared for class, showed an interest in and knowledge of the subject, and treated them with respect; (2) 62% of the respondents felt that their instructors provided regular information about student progress; (3) 69% of the students thought their performance was either "good" or "excellent"; (4) 75% of the students were working at least part-time, and 30% had family commitments that interfered with school; (5) instructors who were generally rated highly in all areas were most likely to be described as creating a classroom atmosphere that encouraged learning, being concerned with students' progress, and making the course interesting; (6) students who rated their performance as "good" or "excellent" gave higher ratings to their instructors than students who did not feel they were doing as well in class; and (7) instructors and assistant professors obtained higher scores than faculty at other ranks. Changes in ratings were analyzed in terms of students' perceptions of their academic performance, perceived course difficulty, class size, reasons for taking the course, time of day of course, instructor rank, and subject matter. The reliability for the survey was found to be very high. (JMC)

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RELIABILITY AND VALIDITY ISSUES: AN ANALYSIS OF MIAMI-DADE'S PILOT STUDENT FEEDBACK SURVEY

Research Report No. 91-09R

August 1991

Marcia J. Belcher, Ph.D.
Research Associate, Sr.

U.S. DEPARTMENT OF EDUCATION
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Abstract

With the implementation of the Fall Term 1990 pilot of the Student Feedback Survey, M-DCC joined the majority of institutions of higher education in formally requesting information from students on their classroom experiences. The process involved randomly selecting one section for each full-time faculty member and administering the surveys prior to the final course withdrawal date. Surveys were returned from 640 sections (or 84% of those initially selected) and included responses from 12,729 students.

Results showed that students were generally pleased with their classroom experiences. At least 95% of students thought their instructor was prepared for class, showed an interest in and knowledge of the subject, and treated them with respect. The same percentage agreed their instructor distributed the course objectives and discussed the grading system with them. The only item where students gave significantly lower ratings was in providing regular information about their progress; only 62% of students agreed or strongly agreed with this item.

Students described themselves as generally hard-working, dedicated to class attendance and performing well in class. Most (75%) were working at least part-time and 30% indicated they had family commitments that interfered with school. Most (80%) thought the class had about the right number of students. A majority (71%) were in the course because it was required. They generally approved of the survey process.

Other studies have found that students see good teaching as involving a variety of factors or components--that the instructor is not just "good" or "bad". Results showed that M-DCC students made similar distinctions. Using factor analysis, it was found that students tended to group items along eight dimensions (or factors). The factors were labelled (1) Focus on the Individual, (2) Competence in the Classroom, (3) Approach to the Material, (4) Grading Policy, (5), Listening to Students, (6) Clarity of Course Objectives, (7) Fairness of Examinations, and (8) Active Learning.

Instructors who were generally rated highly overall were most likely to be described as creating a classroom atmosphere that encouraged learning (item 14), being concerned with students' progress (item 5), and making the course interesting (item 7). In addition, these instructors taught what they said they were going to (item 4), graded their examinations fairly (item 11), and paid attention to student comments (item 20).

Much of the study focused on reliability and validity issues. Results showed the reliability for the survey was very high -- .94 for the 23 items used to rate instructors and courses. Factor reliabilities ranged from .66 to .84. Validity questions focused on testing for rating changes based on student perceptions of their classroom performance, course difficulty, course workload, class size, reasons for taking the course, time of day the course was taught, instructor rank, and subject. The largest differences were found for student performance, instructor rank, and subject area.

On the issue of student classroom performance, results showed that students who rated their performance as "good" or "excellent" gave higher ratings on all eight factors than students who did not feel they were doing as well in class. Perhaps those who were doing well in class found the instructor more effective than those who felt they were not understanding the material. Perhaps the expectation of a high grade produced higher evaluations. In general, however, other research has indicated that amount of learning rather than grades was a better indicator of instructor ratings.

Differences in ratings were also found based on professional rank for four of the factors: (1) Focus on the Individual, (3) Approach to the Material, (5) Listening to Students, and (8) Active Learning. Instructors and assistant professors received higher ratings than other ranks. Again, several interpretations are possible. One is that those who are "freshest" to M-DCC carry that freshness into the classroom. Miller (1987), for example, found that faculty received their highest ratings between their 3rd and 12th years of teaching. Another possibility is that another variable related to faculty rank is actually responsible for the difference. For example, some departments or subject areas which students enjoy more

may have a greater proportion of new faculty and it is the subject area causing the differences rather than faculty rank per se.

Indeed, differences based on subject matter did emerge from the analyses on three factors. Students enrolled in English-as-a-Second-Language (ENS), English (ENC), and Nursing (NUR) courses provided higher ratings in the area of Focus on the Individual than Mathematics (MAT and MAC), Applied Biology (APB), Humanities (HUM), Chemistry (CHM), and Psychology (PSY). In the area of Active Learning, students rated Chemistry, English, Mathematics, Nursing, and English-as-a-Second Language courses higher than Applied Biology, Humanities, and Psychology. Finally, students perceived Mathematics examinations as fairer than English examinations. While some of the differences must surely be due to the content (e.g., hard science vs. the humanities), others are not as readily explained.

Statistical significance was found for some other variables, but the mean differences were not as great as for those already mentioned. These include course difficulty, amount of work required, class size, and reasons for taking the course. There were no differences when ratings were viewed based on the time of day the course was offered.

In summary, the survey appears to meet acceptable standards for reliability and validity. Later research will focus on confirming the factor structure and further explaining rating differences. Readers are urged to study the full report for details and campus-level information.

Reliability and Validity Issues:
An Analysis of Miami-Dade's Pilot Student Feedback Survey

Background and Introduction

Despite all the furor, student evaluations of instruction are a part of academic life at most institutions of higher education in the United States. In the Fall of 1990, Miami-Dade Community College joined the majority by piloting a survey and a process for gathering feedback from students.

The Student Feedback Survey came about as a result of the Teaching/Learning Project. The Teaching/Learning Project began in 1986-87 with the goals of improving the quality of teaching and learning at M-DCC, making teaching a professionally rewarding career, and making teaching and learning the focal point of college activities and decision-making processes. As an initial step in the process, the Faculty Excellence committee developed a series of statements of excellence in teaching rooted in empirical studies on student learning. These statements then became the basis for the survey development work of the Faculty Advancement committee. Thus, the Student Feedback Survey became one piece of a larger whole in focusing on teaching and learning at the College.

The body of research on student ratings of instruction is voluminous. Perhaps this is because student evaluations are seen as having more influence on tenure and promotion decisions than any other data source (Miller, 1987). There is justifiable concern, therefore, that student ratings accurately reflect the quality of instruction provided. Thus, most research has focused on whether students can make distinctions in evaluating instruction, whether their ratings are reliable, and which factors, if any, can bias student ratings.

Student ratings of instruction at Miami-Dade will be included in annual performance reviews and become part of performance portfolios that faculty will present for promotion and tenure decisions. Here, too, then it becomes important that student ratings provide an accurate reflection of faculty performance.

Purpose of the Study

The purpose of this study is to answer some basic questions about the survey results. The focus is mainly on reliability and validity issues. Specifically, the questions for this study are:

1. How do students generally feel about the courses and faculty they are encountering? Satisfied or dissatisfied? On which items are students providing the highest and lowest ratings?

2. How do students generally describe themselves? What are the general characteristics of students who responded to the survey?

3. How do the items relate to one another? If students give a high rating on one item, will they give the same high rating on all the other items or do they respond to each item separately? Do students have one general construct that they are using in their ratings or are there a series of underlying constructs they are using?

4. How reliable is the survey? Do the items form a stable and coherent whole?

5. Do student ratings change based on:
   a. perceived performance in the class?
   b. the difficulty of the course?
   c. the amount of work required by the course?
   d. the number of students in the class?
   e. reasons for enrollment?
   f. time of day the course is offered?
   g. the rank of the faculty member?
   h. the subject matter?

6. What do students think of the survey and the process itself? Is the survey understandable? Too long or too short? What comments did they make about the survey?

Methodology

For the Fall, 1990, term the process implemented by the Faculty Advancement Procedures subcommittee involved randomly selecting one course for each full-time classroom faculty member and distributing answer sheets and surveys to the faculty member for completion in that course. Surveys were administered prior to the final date for course

withdrawal (November 14-26, 1990). Of the 760 full-time faculty who were teaching in the fall term, surveys were processed for 640 or 84%.

The survey for the Fall Term consisted of 43 items, along with spaces for comments on the survey and comments directed to the faculty member. The first 23 items were related to the instructional process. For these items, students had four choices in responding: strongly agree (1), agree (2), disagree (3), or strongly disagree (4). The remaining 20 items requested student information related to classroom performance, perceptions of course, etc. Many of the items in the student demographics section were used to look for changes in the 23 items on the instructional process. A copy of the survey can be found in Appendix A.

This study used two files that contained survey results. One contained the responses for each student for each course; a total of 12,729 surveys were included in this Fall Term file. The second file contained course level information and was based on the 640 sections which had survey data processed. Note that because classes were randomly selected, students might fill out surveys in more than one course. Full-time students, of course, would be more likely to complete multiple surveys than part-time students, because they take more courses and because full-time faculty are more likely to be teaching at times when full-time students are enrolled (i.e., during the day).

A combination of statistical procedures was employed to analyze the data. Readers interested in these details are urged to turn to Appendix B. Summaries of item responses were based on everyone who responded to each item. Most statistical analyses, however, eliminated anyone who failed to answer one or more of the items.

Analysis of Results

What Do Students Think of Their Courses and Faculty?

Students were generally pleased with their classroom experiences. In particular, over 95% thought that their instructor was prepared for class and showed an interest in and knowledge of the subject. In terms of classroom procedures, 95% agreed the instructor

distributed the course objectives and discussed the grading system at the beginning of the semester. Finally, on the interpersonal level, 95% thought the instructor treated them with respect.

There was only one item where a significant number of students failed to agree. Only 62% of the students agreed that the instructor informed them regularly about their progress. Some faculty have indicated that they were unclear about what students meant when rating this item since even in sections where they gave weekly quizzes and returned them the following class period, students rated this item lower than others.

Other items on which more than 15% of the students disagreed included: The instructor is concerned with my progress (18% disagreement), the instructor shows me how the course material can benefit me beyond the classroom (17%), the instructor makes this course interesting (17%), and the instructor uses a variety of teaching methods (17%).

Full results, including the number and percentage of students selecting each item response, are included in Table 1. Results by campus can also be found in this table.

Mean results are shown in Table 2. Note that the means were calculated where strongly agree=1, agree=2, disagree=3, and strongly disagree=4. The lower the numbers, therefore, the more positive the responses. Findings paralleled those for Table 1.

How Do Students Describe Themselves?

Students tend to see themselves as a fairly dedicated and hard-working group. As shown by Table 3, 85% report they almost always come to class, 63% are almost always prepared for class, and 72% almost always pay attention. About two-thirds (67%) say they are almost never late. Faculty may find these perceptions somewhat more optimistic than their own.

A majority of students thought they were doing well in the class being surveyed. About 18% rated their performance as "excellent" and 51% rated it "good". If a rating of

"excellent" corresponds to an "A" and a rating of "good" corresponds to a "B" or "C", then student perceptions of their performance in their classes is somewhat higher than the grade distribution at the end of the term would indicate. According to the most recent analysis of grade distributions (see Vorp, 1990) for all courses, 19% were awarded "A's" and 41% were awarded "B's" or "C's".

Most respondents thought the course difficulty and workload were similar to other courses they had taken. About 50% rated course difficulty about the same while 56% rated the amount of work about the same compared to other courses. If students did not think the course was similar in these respects, they were more likely to rate the course as more difficult (29%) and requiring more work (28%) than they were to see the course as easy. Most (71%) were enrolled in the course because they were required to do so. A few (14%) had previously registered for the course.

Most students were pleased with the size of their classes. A total of 80% thought there were the "right number" of students in their class, while 17% thought there were too many. Only 3% indicated there were "too few" students in the class. We can only speculate who might select this option, but it is possible that students who preferred not to actively participate in class would select this option.

Respondents were also asked to identify themselves by gender, age, and racial and ethnic heritage. Compared to the Fall, 1990, profile of all students (see Morris, 1991), it appears that males and females were proportionally represented and younger students were somewhat over-represented in the survey. While approximately the same proportions identified themselves as "Hispanic" for the Fall Profile and on the survey, a disproportionate number of students (21%) identified themselves as "other" on the survey when racial groups were listed. Thus, ethnic identifications are somewhat suspect on the survey. Recall too, that students may have completed more than one survey.

The survey included a series of questions designed to discover how much time and effort students were giving to courses and school. Slightly over 30% said they had family

commitments that interfered with how well they did in class. About 75% were working at least part-time, and 10% were working more than 40 hours per week. Yet a majority (63%) indicated they were full-time students, enrolling for 12 or more credits. This figure is different from the data in Fall Profile, which indicates that only 36% of students were enrolled full-time, and confirms that full-time students had more opportunities to complete multiple surveys.

Further details on student characteristics can be found in Table 3.

What Dimensions Do Students Use When Rating?

Most of us would agree that the act of teaching is a complex activity involving many dimensions. A faculty member may be very knowledgeable about the subject matter but be unable to project enthusiasm to the students. Another may be enthusiastic but disorganized. The question to be addressed in this section is whether students, too, view the instructor and classroom across a variety of dimensions. If they do, what are those dimensions? Or do students decide their classroom experience was either good or bad and engage in halo ratings with all items uniformly high or low regardless of content?

In the large body of research on student evaluations of instruction, there is general agreement that students can and do make distinctions in their ratings. Marsh (1991) found nine factors or dimensions in his 35-item survey. He named them Learning/Value, Instructor Enthusiasm, Organization/Clarity, Group Interaction, Individual Rapport, Breadth of Coverage, Examinations/Grading, Assignments/Readings, and Workload/Difficulty. In a review of 11 studies, Kulik and McKeachie (1975) identified four common dimensions: Skill, Rapport, Structure, and Overload. Cohen (1981) used six dimensions in his work: the four from Kulik and McKeachie plus two others he identified as Interaction and Feedback. Much of this research, however, has been conducted at four-year institutions. Do community college students make the same kinds of distinctions?

Factor analysis was used to answer this question. Basically, what this procedure does is to look at the correlations among the items and determine which items (if any) group

together separately from other items and form what can be referred to as a "factor" or "dimension" or "construct". Readers interested in more technical details on this process are referred to Appendix B .

Results showed that M-DCC students did make distinctions. In fact, based on the Fall results, it appears that students had eight different underlying constructs in mind as they completed their rating forms (see Table 4). Based on the items included in each of the factor groupings, the factors were tentatively named as follows:

1. Focus on the individual
2. Competence in the classroom
3. Approach to the material
4. Grading policy
5. Listening to students
6. Clarity on course objectives
7. Fairness of examinations
8. Active learning

The items which were most strongly related to that factor are included under the name of the factor and were used to help name the factor (see Table 4). The number or weighting next to the item under each factor shows how much weight the item has in that factor. The weighting can be thought of as a correlation between that item and the factor and can range from an absolute value of 0.0 to 1.0. Though we could include the weights of every item for every factor, we only included those that were .30 or higher to facilitate interpretation.

Factor 1 (Focus on the Individual) included four items such as "The instructor is concerned with my progress" and "The instructor informs me regularly about my progress." Factor 2 was titled "Competence in the Classroom" because it included items on instructor interest in the subject, preparation, and subject knowledge. Factor 3 (Approach to the Material) included items such as "The instructor creates a classroom atmosphere that encourages me to learn" and "The instructor makes this course interesting". Factor 4 (Grading Policy) was based on two items: "The instructor discussed the grading system at the beginning of the semester" and "The instructor made the grading system clear to me."

Factor 5 had some similarities to Factor 1 in the types of items included. This factor was named "Listening to Students" and included items such as "The instructor pays attention to my comments" and "The instructor treats me with respect." Another name for this factor might be "Student Rapport". Factor 6, Clarity of Course Objectives, was based on two items: "The instructor distributed the course objectives/competencies" and "There is agreement between the objectives/competencies of this course and what is taught." Factor 7, entitled "Fairness of Examinations", included the items "The examinations and/or other forms of evaluation are related to the course material" and "The examinations and/or other forms of evaluation are graded fairly." A third item on the grading system appeared under this factor as well as under Factor 4. The last factor, Factor 8, was called "Active Learning" because it included the items "Assignments help me learn the course material" and "The instructor encourages me to think for myself."

Although the factors are presented as separate dimensions, they are correlated with one another the same way that the items are. Table 5 shows that the correlations among the factors are fairly strong, ranging from .44 to .66. The most important factors (based on the variability attributed to each factor) are Factors 1 (Focus on Individual) and Factor 3 (Approach to the Material). Thus, it can be said that how students respond to the items making up these two factors will influence how they respond to the items comprising the other factors.

Like each factor, the responses to each item contain variability that is unique to that item based on its specific wording, etc., and variability the item shares with other items. Table 6 displays the correlations of the items with each other and shows the extent of the common variance between each pair of items. Note that the correlations range from a high of .71 (between items 7 and 14) and a low of .22 (between items 6 and 23). The communalities at the bottom of the table show how much variability each item shares with all other items. One could think of items with high communalities as "linchpin" or core items that hold the survey together. The top six items in this survey are:

Item 14: The instructor creates a classroom atmosphere that encourages me to learn. (c=.73)

Item 5: The instructor is concerned with my progress. (c=.71)

Item 7: The instructor makes this course interesting. (c=.70)

Item 4: There is agreement between the objectives/competencies of this course and what is taught. (c=.69)

Item 11: The examinations and/or other forms of evaluation are graded fairly. (c=.67)

Item 20: The instructor pays attention to my comments. (c=.67)

The item that was least related to the others was item 23, "The instructor starts class on time." This also was the only item which was not included in any of the factors. This item was changed for the Winter survey to "The instructor uses class time productively."

How Reliable is the Survey?

In any measurement process, the reliability or stability of the scores is the first question to be raised. If there is no assurance that the scores or ratings will stay fairly constant--if students change their ratings from occasion to occasion when there is no change in what is being measured--then there is no need to proceed any further. The ratings will have no meaning.

There are a number of ways to measure reliability. One of the simplest is known as "internal consistency reliability." It measures the extent that the items are measuring the same thing. Results showed that the reliability of the survey was very high--.94 for the first 23 items using Coefficient Alpha. The factors also showed satisfactory reliabilities in most cases: .79 for Factor 1, .66 for Factor 2, .84 for Factor 3, .73 for Factor 4, .77 for Factor 5, .73 for Factor 6, .75 for Factor 7, and .69 for Factor 8. Given the small number of items included in the factors, these reliabilities are fairly high, though the reliabilities for factors 2 and 8 should probably be a little higher. Adding more items that are similar usually improves reliability.

Validity Issues: What Makes Ratings Change?

Once reliability has been established, researchers turn to questions of validity. Validity issues revolve around what interpretations can be placed on the ratings or scores. In this study, do factors other than effective teaching influence the ratings that students give instructors?

The number of questions that can be addressed in this area are almost infinite. For a first round, however, some basic characteristics of students, courses, and instructors were used to compare mean or average performance. Most of the questions included in this section were posed by the Faculty Advancement committee. Ethnicity and gender were excluded as variables because they were being addressed in another study (Ciereszko, 1991).

To facilitate comparisons across factors with different numbers of items, the factor scores were standardized so each had a mean of zero (0.0) and a standard deviation of one (1.0). For this analysis, adjustments were made so that means above zero indicated more positive ratings compared to the norm, while means below zero indicated less positive ratings.

Because of the large number of observations included, statistical significance could be found for small mean differences. Therefore, a rule of thumb was implemented for "educational significance." Besides being statistically significant, means had to vary by at least one-half standard deviation (0.5) to be considered educationally significant. Since 98% of the individual ratings for each factor fell between -2.0 and +2.0 (or two standard deviations on either side of the mean), a mean difference of 0.5 was quite large.

As a final check on educational significance, for those comparisons that were statistically significant, the correlation between group membership and the factor rating was calculated. When squared (R^2), this indicates the amount of variability in the scores that can be explained by group membership. For further information on the methodology employed in this set of analyses, please refer to Appendix B.

Do Ratings Change Based on Perceived Classroom Performance?

The question of grades and learning is inextricably tied to ratings of teaching effectiveness. Some argue that all faculty need to do to improve their student evaluations is to grade more leniently (and perhaps assign less work). Others argue, however, that to the extent that grades reflect student learning and that students learn more with more effective teachers, we should expect and even welcome a relationship between student grades or performance and ratings.

At Miami-Dade, as part of the Fall pilot survey, students were asked to rate their performance in class as "excellent", "good", "fair", "poor", or "don't know". Results showed both statistically and educationally significant differences for all factors (see Table 7). In every case, students who rated their performance as "excellent" or "good" gave higher ratings on all factors than students who rated their performance as "poor" or who didn't know how they were performing. Students who rated their performance as "fair" were similar to the higher performers on some factors (e.g. grading policy) and like the poorer performers on other factors (e.g., focus on the individual, approach to the material, and active learning).

The correlation between performance and rating also differed depending on the factor. The highest correlation (.31) was obtained for factor 1, Focus on the Individual, while the lowest (.16) was found for Factor 2, Competence in the Classroom.

These results are in line with findings from other studies. Most researchers have found ratings to be moderately correlated with grades (Miller, 1987). Marsh (1982, 1980), for example, found students gave more favorable ratings when they expected higher grades. In a study of community college courses, however, Beatty and Zahn (1990) concluded that evaluations were not a product of easy grading practices. It should be noted that stronger relationships exist between ratings and achievement. Cohen (1981), in a review of the research, concluded that students rated teachers highest that they learned the most from.

Do Ratings Change Based on Perceived Course Difficulty?

Students at M-DCC were also asked if they thought the course they were rating was more difficult, less difficult, or about the same difficulty as their other courses. Again, statistical significance was found for each factor (see Table 8). With one exception, students who found the course more difficult gave lower ratings than the other two groups (who did not differ from one another). For Factor 3 (Approach to the Material), every group differed from every other group. In terms of educational significance, however, no differences appeared because the mean differences were too small. Correlations were also smaller, varying from .04 to .12.

Like grades, it is hard to pull apart the meaning of course "difficulty". How much of difficulty is due to the subject matter, the approach the teacher takes in presenting it, and student "preparedness" to grasp the material? Though Cohen (1981) generally found no consistent and significant relationship between course difficulty and student achievement, others have found modest relationships between student ratings and course difficulty. Marsh (1982), for example, found that for the same instructor, the course that received the higher evaluation required more work. He found similar results in an earlier study (March, 1980). Brady (1989) asked community college students to read a series of scenarios and to rate hypothetical instructors. He found students in theory preferred a demanding, high grading professor over an easy, high grading one and saw the former as providing "higher quality".

These results contradict those for Miami-Dade. It should be pointed out, however, that the outside studies combined "course difficulty" and "workload". Among other possible interpretations, "course difficulty" can mean that the student had to work very hard to understand the material but was able to with work, and/or the student received a lower grade in this course because of lack of comprehension of the material, and/or the course had a heavier workload than most but the student performed well.

Do Ratings Change Based on Amount of Work Required?

As previously noted, a course may not be difficult but may require a great deal of work from students. As part of the survey, students were asked to judge whether the course

they were completing the survey in was more work, less work, or about the same as their other courses. Again, statistical significance, but not educational significance, was obtained on all eight factors. Correlations were low, ranging from .05 to .12.

In most cases, students who thought the course required about the same amount of work as other courses gave the highest ratings. Students who thought the course was less work than their other courses were likely to give the lowest ratings. This group gave the lowest ratings on Focus on the Individual (Factor 1), Competence in the Classroom (Factor 2), Grading Policy (Factor 4), Fairness of Examinations (Factor 7), and Active Learning (Factor 8).

These findings are somewhat contradictory to the M-DCC results on course work-load/difficulty. What is similar, however, is the finding that requiring less in the class will not lead to higher ratings from students.

Do Ratings Change Based on Class Size?

Logic would dictate that smaller classes would receive more favorable evaluations. Research findings, however, have been mixed (Miller, 1987). Feldman (1984) reported that when relationships were found, size was typically related to evaluations in one of two patterns. The first pattern was a weak inverse relationship with higher evaluations associated with smaller classes. Bausell & Bausell (1979) found, for example, that when evaluations for two classes for the same instructor were considered, the larger class received lower evaluations. The second was a U-shaped pattern with higher evaluations associated with very large and very small classes; it was hypothesized that better teachers may have been selected to teach larger sections as a way of explaining this second pattern.

In this study, class size was defined in two ways. One was to ask students whether they thought there were too many, too few, or about the right number of students in the class. The other approach was to use the end-of-term course enrollments. While it probably would have been more accurate to look at course enrollment at the time of survey completion, unfortunately this information was not captured by the computer and retained

for analysis. A correlation between class size at the end of the term and number of students completing the survey, however, indicated a strong relationship between these two measures (r=.90).

Based on students' perceptions of class size, statistical significance, but not educational significance, was found for all eight factors. Generally, students who thought they had about the right number of students in their classes gave the most positive ratings. Students who thought there were "too few" students in their class gave the lowest ratings.

A definition of what was "too many" or "too few" seemed to be extremely individualistic. In only 20% of the classes surveyed did all students agree that the class size was about right. An additional 21% of classes contained students who responded in all three categories--too many, right number, and too few. For students who felt there were too many enrolled, the median end-of-term class size was 28. The median dropped by 5 students to 23 for those who thought the class contained about the right number of students. For those who thought too few students were enrolled the median class size was 21.

Using end-of-term enrollment resulted in statistical significance on fewer factors than was found using student perceptions. Statistical significance was obtained for Factor 1 (Focus on the Individual), Factor 5 (Listening to Students), and Factor 8 (Active Learning). Generally, large classes (over 30 students) were rated significantly lower than small classes (20 or less students). Classes in the 20-30 student range fell in the middle. Because the means did not vary by .5 or more, none of these differences reached educational significance (see Table 11). Other researchers have also noted that class size seems related more to some factors than others, e.g. Group Interaction and Individual Rapport (Marsh, Overall, & Kesler, 1979; Frey, 1978).

Do Ratings Change Based on Reasons for Taking the Course?

Students responding to the survey were asked why they had enrolled in the course. Over 70% were there because it was required for their degree. Other reasons were divided among the remaining four options.

Again, statistical but not educational significance was obtained for each factor. Generally, the most positive group of raters was the group who enrolled based on personal interest in the course. The most negative group tended to be those who enrolled for "other" reasons. Those who enrolled because the course was required or an elective fell between these two extremes. See Table 12 for further details. These findings confirm Marsh's previous research (1980, 1982).

Do Ratings Change Based on the Time of Day the Course is Offered?

There is a general perception that different types of students enroll in courses offered at different times of the day. Those who are older and employed are thought to take courses very early in the day, over lunch, and in the evenings. Full-time students seem to make up the bulk of the morning and afternoon enrollments. In addition, class sizes change with early morning classes tending to be the smallest. At least one study confirms that afternoon classes receive lower ratings than morning classes (Nichols & Soper, 1972 as reviewed in Arubayi, 1987).

At M-DCC, however, results indicated that while different types of students may indeed enroll at different times, they do not give different ratings. Statistical significance was not obtained on any factor for any group (see Table 13).

Do Ratings Change Based on Instructor Rank?

Rank tends to be viewed as a shorthand indicator of age of the faculty member and years of experience, though Feldman (1983) warns that age, rank, and instructional experience should not be thought of as interchangeable. He found that higher evaluations were associated with higher rank, younger teachers, and less overall experience. Marsh (1982) measured of experience in another way, finding that for the same instructor teaching the same course, higher ratings were obtained when the course had previously been taught at least once. Miller (1987) noted that faculty members typically receive their best ratings between their third and twelfth years of teaching. In about half to two-thirds of the studies, however, no relationship was found (Feldman, 1983). In others, higher rank was associated with higher ratings (Arubayi, 1987).

At Miami-Dade, significant differences in student ratings by rank of the instructor were found on four factors: (1) Focus on the Individual, (3) Approach to the Material, (5) Listening to Students, and (8) Active Learning. Educational significance was also achieved. The strongest relationship was for the first factor where rank explained 9% of the ratings variability; the correlation was .29. In general, higher ratings were found for instructors and assistant professors compared to associate professors, associate professors senior, and full professors. Full professors received the least positive ratings in all cases. Further details can be found in Table 14.

It is unclear exactly what these results mean. The most straightforward interpretation is that the longer a faculty member remains at M-DCC, the lower the student ratings. One alternative explanation, however, is that some departments have more new faculty than others and these departments have courses that students respond more positively to. It is also possible that new faculty are not new to teaching and bring with them a variety of instructional experiences. These findings, however, are not contradictory with prior research.

Do Ratings Change Based on Subject Matter?

To conduct this analysis, only departments who had at least 20 sections evaluated were included. This reduced the number of sections from 640 to 309. On the "hard sciences" side, this included Applied Biology, Chemistry, Mathematics, and Nursing. The remaining courses were English, English-as-a-Second-Language, Humanities, and Psychology.

Both statistical and educational significance were obtained for three factors: (1) Focus on the Individual, (7) Fairness of Examinations, and (8) Active Learning. The strongest relationship between subject matter and student ratings were found for Factors 1 and 8. For Factor 1, subject matter explained 19% of the variability in ratings and correlated .44. For Factor 8, the proportion of variability explained was .16 and the correlation was .40. Subject matter explained about 8% of the variability for Factor 7. See Table 15 for further details.

For Factor 1 (Focus on the Individual), subject areas receiving the most positive ratings were English as a Second Language, English, and Nursing. These ratings can be compared to the group of lowest rated subjects: Mathematics, Applied Biology, Humanities, Chemistry, and Psychology. The lowest ratings were obtained for Applied Biology while the highest were found for English-as-a-Second-Language courses.

For Factor 7 (Fairness of Examinations), the only significant difference was between the higher ratings in Mathematics compared to English. This is not surprising given the content of each area and the ways students are tested (essay vs. problem completion or multiple-choice).

For Factor 8, students saw less active learning taking place in Applied Biology, Humanities, and Psychology compared to Chemistry, English, Mathematics, Nursing, and English-as-a-Second-Language courses. Again, the lowest ratings were obtained for Applied Biology while the highest were found for English-as-a-Second-Language courses.

Other researchers have found that mathematics and natural science courses were rated lower than humanities and social sciences (e.g., Beatty & Zahn, 1990; Braskamp et al., 1984; Feldman, 1978; Marsh 1984). Miami-Dade's results, however, differed from this pattern. Humanities and Psychology (both required core courses in most cases) received lower ratings than Nursing on two specific factors--Focus on the Individual and Active Learning. Perhaps, as Marsh (1980) found, we are seeing the confounding effects of prior interest intermingled with approach to the subject.

What Do Students Think of the Survey Process?

The last two items on the survey asked students about the length of the survey and the difficulty of the survey. About two-thirds of the students thought the length of the survey was about right. About 30% thought it was too long. Almost everyone (98%) agreed that the questionnaire was easy. (See Table 16).

In addition, students were offered the opportunity to make suggestions about the questionnaire. A sample of those with comments was selected for analysis of the content. A majority of the comments from students were of the type that indicated they were generally satisfied with the survey. Those who had comments suggesting changes were most likely to comment on the length of the questionnaire or feel that the questionnaire asked too many questions about the respondents. A listing of the sample of comments can be found in Table 17.

Summary and Discussion

The first full pilot of the Student Feedback Survey, initiated in the Fall of 1990, involved randomly selecting one section to be surveyed for each full-time faculty member at the College. Surveys were returned from 640 sections (or 84% of those initially selected) and included 12,729 responses. The first 23 items of the survey asked students to evaluate the instructor and the course. The remaining 20 items requested information about the student.

Results showed that students were generally pleased with their classroom experiences. At least 95% of students thought their instructor was prepared for class, showed an interest in and knowledge of the subject, and treated them with respect. Their instructor distributed the course objectives and discussed the grading system with them. The only item where students gave significantly lower ratings was in providing regular information about their progress; only 62% of students agreed or strongly agreed with this item.

Students described themselves as generally hard-working and dedicated to class attendance. A majority (69%) thought their performance was either "good" or "excellent". Most (75%) were working at least part-time and 30% indicated they had family commitments that interfered with school. They generally approved of the survey process. Based on headcount, full-time students were over-represented by the survey, probably because they were more likely to be in multiple classes selected for inclusion.

About half described the class being evaluated as about as difficult and requiring similar amounts of work as their other courses. Most (80%) thought about the right number of students were in their class. A majority (71%) were in the course because it was required.

Using factor analysis, it was found that students tended to group items along eight dimensions (or factors). The factors were named (1) Focus on the Individual, (2) Competence in the Classroom, (3) Approach to the Material, (4) Grading Policy, (5) Listening to Students, (6) Clarity of Course Objectives, (7) Fairness of Examinations, and (8) Active Learning. Thus, for example, a faculty member might be rated more highly on Competence in the Classroom (Factor 2) and less highly on use of Active Learning (Factor 8) or Fairness of Examinations (Factor 7).

Instructors who were generally rated highly in all areas were most likely to be described as creating a classroom atmosphere that encouraged learning (item 14), being concerned with students' progress (item 5), and making the course interesting (item 7). In addition, these instructors taught what they said they were going to (item 4), graded their exams fairly (item 11), and paid attention to student comments (item 20) according to student perceptions.

The reliability for the survey was very high -- .94 for the 23 items used to rate instructors and courses. The reliabilities for the eight factors that make up the 23-item part of the survey were also fairly high. They ranged from a low of .66 for Factor 2 to a high of .84 for Factor 3.

Besides the issue of whether students could be reliable and discriminating judges, a second issue was whether ratings would change based on characteristics not directly related to teaching excellence. For this study, the following variables were studied at the student level: student perceptions of their classroom performance, course difficulty, course workload, class size, and reasons for taking the course. At the course level, analyses were conducted looking for rating changes based on time of day the course was taught, instructor

the end of the semester, and subject taught. Differences large enough to be labeled "educationally significant" were found for three variables: student perceptions of their classroom performance, instructor rank, and subject matter.

On the issue of student classroom performance, results showed that students who rated their performance as "good" or "excellent" gave higher ratings on all eight factors than students who did not feel they were doing as well in class. .This may mean that those who are doing well in class may find the instructor more effective than those who feel they are not understanding the material. Another explanation is that the simple expectation of a high grade will produce higher evaluations. In general, past research has indicated that amount of learning rather than grades is a better indicator of instructor ratings.

Differences in ratings were also found based on professional rank for four of the factors: (1) Focus on the Individual, (3) Approach to the Material, (5) Listening to Students, and (8) Active Learning. Instructors and assistant professors obtained higher scores than faculty at other ranks. Again, several interpretations are possible. One is that those who are "freshest" to M-DCC carry that freshness into the classroom. Prior research bears this interpretation out. Miller (1987), for example, found that faculty receive their highest ratings between their 3rd and 12th years of teaching. Another possibility is that another variable related to faculty rank is actually responsible for the difference. For example, some departments or subject areas which students enjoy more may have a greater proportion of new faculty and it is the subject area causing the differences.

Indeed, differences based on subject matter did emerge from the analyses on three factors. Students enrolled in English-as-a-Second-Language courses, English, and Nursing courses provided higher ratings in the area of Focus on the Individual than Mathematics, Applied Biology, Humanities, Chemistry, and Psychology. In the area of Active Learning (Factor 8), students rated Chemistry, English, Mathematics, Nursing, and English-as-a-Second-Language courses as higher than Applied Biology, Humanities, and Psychology. Finally, students perceived Mathematics examinations as fairer than English examinations.

While some of the differences must surely be due to the content (e.g., hard science vs. the humanities), others are not as readily explained.

Statistical significance was found for some other variables, but the mean differences were not as great as for those already mentioned. These include course difficulty, amount of work required, class size, and reasons for taking the course. There were no differences when ratings were viewed based on the time of day the course was offered.

Taken as a whole, these results seem to confirm that the Student Feedback Survey is basically a reliable and valid instrument. The next series of analyses using the Winter, 1991, data will look at the variables in combination instead of one at a time, study the effects of these variables when the effectiveness of the instructor is held constant (by teaching multiple sections of the same course), and seek to confirm the factor analytic pattern found in the Fall data.

Table 1

Results of Fall 1990 Pilot of Student Feedback Survey:
Items Related to Faculty Characteristics

	Campus											
	North		South		Wolfson		Medical Center		Homestead		College-Wide	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
1. The Instructor Is Prepared For Class												
Strongly Agree (1)	2,999	73.5	4,070	71.0	1,012	76.1	882	68.8	116	64.4	9,079	72.0
Agree (2)	979	24.0	1,527	26.6	292	22.0	370	28.8	55	30.6	3,223	25.6
Disagree (3)	75	1.9	103	1.8	20	1.5	28	2.2	7	3.9	233	1.8
Strongly Disagree (4)	25	0.6	36	0.6	5	0.4	3	0.2	2	1.1	71	0.6
Total	4,078	100.0	5,736	100.0	1,329	100.0	1,283	100.0	180	100.0	12,606	100.0
Missing = 123												
2. The Instructor Shows Interest In The Subject												
Strongly Agree (1)	3,138	76.9	4,375	76.2	1,037	77.9	943	73.7	141	79.2	9,634	76.4
Agree (2)	872	21.4	1,230	21.4	275	20.7	314	24.5	36	20.2	2,727	21.6
Disagree (3)	62	1.5	107	1.9	13	1.0	21	1.6	1	0.6	204	1.6
Strongly Disagree (4)	8	0.2	31	0.5	5	0.4	1	0.1	0	-	45	0.4
Total	4,080	100.0	5,743	100.0	1,330	100.0	1,279	100.0	178	100.0	12,610	100.0
Missing = 119												
3. The Instructor Distributed The Course Objectives/Competencies												
Strongly Agree (1)	2,461	60.4	3,428	59.9	855	64.5	788	61.9	116	65.2	7,648	60.8
Agree (2)	1,378	33.8	1,987	34.7	412	31.1	413	32.4	52	29.2	4,242	33.9
Disagree (3)	190	4.7	235	4.1	47	3.5	61	4.8	9	5.1	542	4.3
Strongly Disagree (4)	44	1.1	74	1.3	12	0.9	11	0.9	1	0.6	142	1.1
Total	4,073	100.0	5,724	100.0	1,326	100.0	1,273	10.1	178	100.0	12,574	100.0
Missing = 155												

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Table 1
(continued)

Results of Fall 1990 Pilot of Student Feedback Survey:
Items Related to Faculty Characteristics

	Campus											
	North		South		Wolfson		Medical Center		Homestead		College-Wide	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
4. There Is Agreement Between The Objectives/Competencies Of This Course And What Is Taught												
Strongly Agree (1)	2,085	51.4	2,981	52.2	754	57.1	670	52.8	84	47.2	6,574	52.4
Agree (2)	1,656	40.8	2,277	39.9	480	36.3	470	37.0	73	41.0	4,956	39.5
Disagree (3)	254	6.3	355	6.2	74	5.6	96	7.5	19	10.7	798	6.4
Strongly Disagree (4)	63	1.5	96	1.7	13	1.0	34	2.7	2	1.1	208	1.7
Total	4,058	100.0	5,709	100.0	1,321	100.0	1,270	100.0	178	100.0	12,536	100.0
Missing = 193												
5. The Instructor Is Concerned With My Progress												
Strongly Agree (1)	1,756	43.2	1,891	33.2	702	53.2	607	47.9	77	43.3	5,033	40.2
Agree (2)	1,677	41.3	2,565	45.1	470	35.6	463	36.6	76	42.7	5,251	41.9
Disagree (3)	485	11.9	960	16.9	121	9.2	161	12.7	20	11.2	1,747	14.0
Strongly Disagree (4)	143	3.5	276	4.8	27	2.0	36	2.8	5	2.8	487	3.9
Total	4,061	100.0	5,692	100.0	1,320	100.0	1,267	100.0	178	100.0	12,518	100.0
Missing = 211												
6. The Instructor Shows Me How The Course Material Can Benefit Me Beyond The Classroom												
Strongly Agree (1)	1,878	46.2	2,237	39.2	673	50.9	612	48.0	58	32.4	5,458	43.5
Agree (2)	1,553	38.2	2,289	40.2	500	37.9	477	37.4	86	48.0	4,905	39.1
Disagree (3)	519	12.8	935	16.4	124	9.4	153	12.0	30	16.8	1,761	14.1
Strongly Disagree (4)	116	2.8	239	4.2	24	1.8	33	2.6	5	2.8	417	3.3
Total	4,066	100.0	5,700	100.0	1,321	100.0	1,275	100.0	179	100.0	12,541	100.0
Missing = 188												

Table 1
(continued)

Results of Fall 1990 Pilot of Student Feedback Survey:
Items Related to Faculty Characteristics

	Campus											
	North		South		Wolfson		Medical Center		Homestead		College-Wide	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
7. The Instructor Makes This Course Interesting												
Strongly Agree (1)	2,011	49.4	2,531	44.3	806	61.1	645	50.5	64	35.9	6,057	48.3
Agree (2)	1,402	34.5	2,080	36.4	385	29.2	450	35.3	68	38.2	4,385	34.9
Disagree (3)	463	11.4	782	13.7	99	7.5	133	10.4	32	18.0	1,509	12.0
Strongly Disagree (4)	193	4.7	316	5.6	29	2.2	49	3.8	14	7.9	601	4.8
Total	4,069	100.0	5,709	100.0	1,319	100.0	1,277	100.0	178	100.0	12,552	100.0
Missing = 177												
8. The Instructor Is Available For Individual Help												
Strongly Agree (1)	2,063	50.7	2,678	47.0	771	58.4	653	51.4	96	53.9	6,261	50.0
Agree (2)	1,594	39.2	2,426	42.6	452	34.2	475	37.4	66	37.1	5,013	40.0
Disagree (3)	328	8.1	455	8.0	80	6.1	114	8.9	12	6.7	989	7.9
Strongly Disagree (4)	82	2.0	136	2.4	18	1.3	29	2.3	4	2.3	269	2.1
Total	4,067	100.0	5,695	100.0	1,321	100.0	1,271	100.0	178	100.0	12,532	100.0
Missing = 197												
9. The Instructor Encourages Questions In Class												
Strongly Agree (1)	2,336	57.4	3,025	52.8	838	63.2	700	54.6	102	57.0	7,001	55.6
Agree (2)	1,412	34.7	2,053	35.8	411	31.0	460	35.9	60	33.5	4,396	34.9
Disagree (3)	271	6.6	513	9.0	67	5.1	94	7.3	11	6.2	956	7.6
Strongly Disagree (4)	54	1.3	137	2.4	9	0.7	28	2.2	6	3.5	234	1.9
Total	4,073	100.0	5,728	100.0	1,325	100.0	1,282	100.0	179	100.0	12,587	100.0
Missing = 142												

Table 1
(continued)

Results of Fall 1990 Pilot of Student Feedback Survey:
Items Related to Faculty Characteristics

	Campus											
	North		South		Wolfson		Medical Center		Homestead		College-Wide	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
10. The Examinations And/Or Other Forms Of Evaluation Are Related To The Course Material												
Strongly Agree (1)	2,641	64.9	3,703	64.8	865	65.2	722	56.9	109	61.6	8,040	64.0
Agree (2)	1,251	30.8	1,741	30.4	408	30.8	431	34.0	61	34.5	3,892	31.0
Disagree (3)	139	3.4	211	3.7	47	3.5	83	6.5	5	2.8	485	3.9
Strongly Disagree (4)	37	0.9	64	1.1	7	0.5	33	2.6	2	1.1	143	1.1
Total	4,068	100.0	5,719	100.0	1,327	100.0	1,269	100.0	177	1.4	12,560	100.0
Missing = 169												
11. The Examinations And/Or Other Forms Of Evaluation Are Graded Fairly												
Strongly Agree (1)	2,429	60.0	3,311	57.9	811	61.3	706	55.5	102	57.3	7,359	58.7
Agree (2)	1,335	33.0	1,942	34.0	429	32.4	445	35.0	63	35.4	4,214	33.6
Disagree (3)	223	5.5	352	6.2	71	5.4	95	7.5	11	6.2	752	6.0
Strongly Disagree (4)	63	1.5	111	1.9	12	0.9	26	2.0	2	1.1	214	1.7
Total	4,050	100.0	5,716	100.0	1,323	100.0	1,272	100.0	178	100.0	12,539	100.0
Missing = 190												
12. The Instructor Made The Grading System Clear To Me												
Strongly Agree (1)	2,381	58.4	3,158	55.2	817	61.8	763	59.9	85	47.5	7,204	57.3
Agree (2)	1,331	32.7	2,004	35.0	422	32.0	429	33.7	72	40.2	4,258	33.9
Disagree (3)	300	7.4	443	7.8	71	5.4	70	5.5	19	10.6	903	7.2
Strongly Disagree (4)	61	1.5	114	2.0	11	0.8	11	0.9	3	1.7	200	1.6
Total	4,073	100.0	5,719	100.0	1,321	100.0	1,273	100.0	179	100.0	12,565	100.0
Missing = 164												

Table 1
(continued)

Results of Fall 1990 Pilot of Student Feedback Survey:
Items Related to Faculty Characteristics

	Campus											
	North		South		Wolfson		Medical Center		Homestead		College-Wide	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
13. The Instructor Presents Course Material Clearly												
Strongly Agree (1)	2,233	54.8	2,834	49.5	826	62.5	651	51.1	76	43.2	6,620	52.7
Agree (2)	1,442	35.4	2,140	37.4	408	30.9	452	35.4	68	38.6	4,510	35.9
Disagree (3)	315	7.7	571	10.1	69	5.2	132	10.4	26	14.8	1,113	8.9
Strongly Disagree (4)	83	2.1	174	3.0	18	1.4	40	3.1	6	3.4	321	2.5
Total	4,073	100.0	5,719	100.0	1,321	100.0	1,275	100.0	176	100.0	12,564	100.0
Missing = 165												
14. The Instructor Creates A Classroom Atmosphere That Encourages Me to Learn												
Strongly Agree (1)	2,060	50.6	2,557	44.8	789	59.6	651	51.2	63	35.2	6,120	48.8
Agree (2)	1,485	36.5	2,192	38.4	420	31.8	438	34.4	84	46.9	4,619	36.8
Disagree (3)	393	9.7	708	12.4	88	6.6	147	11.6	26	14.5	1,362	10.8
Strongly Disagree (4)	130	3.2	250	4.4	26	2.0	36	2.8	6	3.4	448	3.6
Total	4,068	100.0	5,707	100.0	1,323	100.0	1,272	100.0	179	100.0	12,549	100.0
Missing = 180												
15. The Instructor Demonstrates Knowledge Of The Subject												
Strongly Agree (1)	2,923	71.8	4,158	72.8	978	74.0	874	68.7	11.9	66.5	9,052	72.1
Agree (2)	1,013	24.9	1,381	24.2	313	23.7	360	28.3	57	31.8	3,124	24.9
Disagree (3)	109	2.7	134	2.4	22	1.7	30	2.3	2	1.1	297	2.4
Strongly Disagree (4)	27	0.6	38	0.7	8	0.6	9	0.7	1	0.6	83	0.6
Total	4,072	100.0	5,711	100.0	1,321	100.0	1,273	100.0	179	100.0	12,556	100.0
Missing = 173												

Table 1
(continued)

Results of Fall 1990 Pilot of Student Feedback Survey:
Items Related to Faculty Characteristics

	Campus											
	North		South		Wolfson		Medical Center		Homestead		College-Wide	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
16. The Instructor Uses A Variety Of Teaching Methods (For Example, Lecture, Discussions, Demonstrations, Audiovisual Aids And/Or Others)												
Strongly Agree (1)	2,091	51.4	2,538	44.5	732	55.5	649	51.3	71	39.7	6,081	48.5
Agree (2)	1,359	33.4	2,087	36.6	423	32.1	442	34.9	75	41.9	4,386	35.0
Disagree (3)	510	12.6	826	14.5	133	10.1	145	11.4	24	13.4	1,638	13.1
Strongly Disagree (4)	107	2.6	251	4.4	30	2.3	30	2.4	9	510	427	3.4
Total	4,067	100.0	5,702	100.0	1,318	100.0	1,266	100.0	179	100.0	12,532	100.0
Missing = 197												
17. Assignments Help Me Learn The Course Material												
Strongly Agree (1)	2,011	49.6	2,405	42.3	710	53.6	539	42.4	84	46.9	5,749	45.9
Agree (2)	1,605	39.6	2,406	42.3	477	36.0	558	43.8	73	40.8	5,119	40.9
Disagree (3)	355	8.7	666	11.7	117	8.8	135	10.6	14	7.8	1,287	10.3
Strongly Disagree (4)	86	2.1	215	3.7	21	1.6	41	3.2	8	4.5	370	2.9
Total	4,057	100.0	5,691	100.0	1,325	100.0	1,273	100.0	179	100.0	12,525	100.0
Missing = 204												
18. The Instructor Encourages Me To Think For Myself												
Strongly Agree (1)	1,985	48.8	2,472	43.4	735	55.7	630	49.5	78	43.8	5,900	47.1
Agree (2)	1,680	41.3	2,490	43.8	467	35.4	513	40.3	89	50.0	5,239	41.8
Disagree (3)	321	7.9	587	10.3	94	7.1	111	8.7	10	5.6	1,123	9.0
Strongly Disagree (4)	81	2.0	144	2.5	24	1.8	19	1.5	1	0.6	269	2.1
Total	4,067	100.0	5,693	100.0	1,320	100.0	1,273	100.0	178	100.0	12,531	100.0
Missing = 198												

Table 1
(continued)

Results of Fall 1990 Pilot of Student Feedback Survey:
Items Related to Faculty Characteristics

	Campus											
	North		South		Wolfson		Medical Center		Homestead		College-Wide	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
19. The Instructor Informs Me Regularly About My Progress												
Strongly Agree (1)	1,072	26.5	1,115	19.7	493	37.4	390	30.7	39	21.8	3,109	25.0
Agree (2)	1,555	38.5	1,980	35.1	491	37.2	455	35.9	70	39.1	4,551	36.6
Disagree (3)	1,113	27.6	1,878	33.3	279	21.2	327	25.8	56	31.3	3,653	29.3
Strongly Disagree (4)	298	7.4	673	11.9	55	4.2	96	7.6	14	7.8	1,136	9.1
Total	4,038	100.0	5,646	100.0	1,318	100.0	1,268	100.0	179	100.0	12,449	100.0
Missing = 280												
20. The Instructor Pays Attention To My Comments												
Strongly Agree (1)	2,101	51.6	2,591	45.4	767	58.3	627	49.4	85	47.7	6,171	49.2
Agree (2)	1,618	39.8	2,529	44.4	465	35.3	512	40.3	72	40.5	5,196	41.5
Disagree (3)	276	6.8	451	7.9	67	5.1	96	7.6	16	9.0	906	7.2
Strongly Disagree (4)	74	1.8	131	2.3	17	1.3	34	2.7	5	2.8	261	2.1
Total	4,069	100.0	5,702	100.0	1,316	100.0	1,269	100.0	178	100.0	12,534	100.0
Missing = 195												
21. The Instructor Treats Me With Respect												
Strongly Agree (1)	2,699	66.5	3,507	61.4	999	75.5	787	61.7	100	55.9	8,092	64.5
Agree (2)	1,168	28.7	1,895	33.2	274	20.7	418	32.8	66	36.8	3,821	30.4
Disagree (3)	133	3.3	203	3.5	35	2.6	49	3.8	8	4.5	428	3.4
Strongly Disagree (4)	61	1.5	107	1.9	16	1.2	22	1.7	5	2.8	211	1.7
Total	4,061	100.0	5,712	100.0	1,324	100.0	1,276	100.0	179	100.0	12,552	100.0
Missing = 177												

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Table 1
(continued)

Results of Fall 1990 Pilot of Student Feedback Survey:
Items Related to Faculty Characteristics

	Campus											
	North		South		Wolfson		Medical Center		Homestead		College-Wide	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
22. The Instructor Discussed The Grading System At The Beginning Of The Semester												
Strongly Agree (1)	2,687	66.1	3,561	62.3	916	69.2	839	66.1	105	58.7	8,108	64.6
Agree (2)	1,154	28.4	1,824	31.9	354	26.7	379	29.9	62	34.6	3,773	30.1
Disagree (3)	174	4.3	274	4.8	46	3.5	41	3.2	9	5.0	544	4.3
Strongly Disagree (4)	48	1.2	58	1.0	8	0.6	10	0.8	3	1.7	127	1.0
Total	4,063	100.0	5,717	100.0	1,324	100.0	1,269	100.0	179	100.0	12,552	100.0
Missing = 177												
23. The Instructor Starts Class On Time												
Strongly Agree (1)	2,553	62.8	3,677	64.2	942	71.0	841	66.3	126	70.4	8,139	64.7
Agree (2)	1,171	28.8	1,692	29.6	319	24.1	355	28.0	42	23.4	3,579	28.5
Disagree (3)	250	6.2	281	4.9	55	4.1	57	4.5	8	4.5	651	5.2
Strongly Disagree (4)	90	2.2	77	1.3	10	0.8	15	1.2	3	1.7	195	1.6
Total	4,064	100.0	5,727	100.0	1,326	100.0	1,268	100.0	179	100.0	12,564	100.0
Missing = 165												

Table 2

Mean Results of Fall 1990 Pilot of Student Feedback Survey

		Number	Mean	Deviation
	North Campus			
Item				
1	Instructor is Prepared for Class	4,078	1.30	0.53
2	Instructor Shows Interest in Subject	4,080	1.25	0.48
3	Distributed Course Objectives	4,073	1.46	0.64
4	Objectives and What is Taught Agree	4,058	1.58	0.68
5	Concerned With my Progress	4,061	1.76	0.80
6	Shows How Material Can Benefit	4,066	1.72	0.79
7	Makes Course Interesting	4,069	1.71	0.85
8	Available for Individual Help	4,067	1.61	0.72
9	Encourages Questions in Class	4,073	1.52	0.68
10	Evaluation Related to Material	4,068	1.40	0.60
11	Exams Graded Fairly	4,050	1.49	0.67
12	Grading System Clear	4,073	1.52	0.70
13	Presents Material Clearly	4,073	1.57	0.72
14	Creates Atmosphere Encouraging Learning	4,068	1.65	0.78
15	Demonstrates Knowledge of Subject	4,072	1.32	0.56
16	Uses Variety of Teaching Methods	4,067	1.66	0.79
17	Assignments Help Learning	4,057	1.63	0.73
18	Encourages Thinking for Self	4,067	1.63	0.71
19	Informs Regularly Progress	4,038	2.16	0.90
20	Pays Attention to Comments	4,069	1.59	0.70
21	Treats me With Respect	4,061	1.40	0.63
22	Discussed Grading at Beginning	4,063	1.41	0.63
23	Starts Class on Time	4,064	1.48	0.71
Factor				
1	Focus on Individual (5,19,6,8)	4,090	7.19	2.48
2	Competence in Classroom (2,1,15)	4,090	3.85	1.25
3	Approach to Material (14,9,13,16)	4,087	6.57	2.54
4	Grading Policy (22,12)	4,085	2.91	1.17
5	Listening to Students (20,21,9)	4,087	4.48	1.63
6	Clarity on Course Objectives (4,3)	4,084	3.03	1.17
7	Fairness of Exams (11,10,12*)	4,087	4.38	1.60
8	Active Learning (17,18)	4,082	3.25	1.25
Total		4,091	35.60	10.36
	South Campus			
Item				
1	Instructor is Prepared for Class	5,736	1.32	0.54
2	Instructor Shows Interest in Subject	5,743	1.27	0.52
3	Distributed Course Objectives	5,724	1.47	0.64
4	Objectives and What is Taught Agree	5,709	1.57	0.69
5	Concerned With my Progress	5,692	1.93	0.83
6	Shows How Material Can Benefit	5,700	1.86	0.84
7	Makes Course Interesting	5,709	1.80	0.87
8	Available for Individual Help	5,695	1.66	0.73
9	Encourages Questions in Class	5,728	1.61	0.75
10	Evaluation Related to Material	5,719	1.41	0.62
11	Exams Graded Fairly	5,716	1.52	0.70
12	Grading System Clear	5,719	1.57	0.72
13	Presents Material Clearly	5,719	1.66	0.78
14	Creates Atmosphere Encouraging Learning	5,707	1.76	0.83
15	Demonstrates Knowledge of Subject	5,711	1.31	0.55
16	Uses Variety of Teaching Methods	5,702	1.79	0.85
17	Assignments Help Learning	5,691	1.77	0.80
18	Encourages Thinking for Self	5,693	1.72	0.75
19	Informs Regularly Progress	5,646	2.37	0.93
20	Pays Attention to Comments	5,702	1.67	0.72
21	Treats me With Respect	5,712	1.46	0.66
22	Discussed Grading at Beginning	5,717	1.45	0.64
23	Starts Class on Time	5,727	1.43	0.65
Factor				
1	Focus on Individual (5,19,6,8)	5,746	7.73	2.60
2	Competence in Classroom (2,1,15)	5,750	3.88	1.31
3	Approach to Material (14,9,13,16)	5,747	6.98	2.71
4	Grading Policy (22,12)	5,743	3.00	1.20
5	Listening to Students (20,21,9)	5,745	4.71	1.77
6	Clarity on Course Objectives (4,3)	5,741	4.48	1.65
7	Fairness of Exams (11,10,12*)	5,747	3.03	1.18
8	Active Learning (17,18)	5,731	3.47	1.65
Total		5,750	37.11	10.73

*Included in more than one factor.

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Table 2
(continued)

Mean Results of Fall 1990 Pilot of Student Feedback Survey

		Number	Mean	Deviation
	Wolfson Campus			
Item				
1	Instructor is Prepared for Class	1,329	1.26	0.50
2	Instructor Shows Interest in Subject	1,330	1.24	0.47
3	Distributed Course Objectives	1,326	1.41	0.61
4	Objectives and What is Taught Agree	1,321	1.50	0.65
5	Concerned With my Progress	1,320	1.60	0.74
6	Shows How Material Can Benefit	1,321	1.62	0.73
7	Makes Course Interesting	1,319	1.51	0.73
8	Available for Individual Help	1,321	1.50	0.67
9	Encourages Questions in Class	1,325	1.43	0.62
10	Evaluation Related to Material	1,327	1.39	0.58
11	Exams Graded Fairly	1,373	1.46	0.64
12	Grading System Clear	1,321	1.45	0.64
13	Presents Material Clearly	1,321	1.45	0.66
14	Creates Atmosphere Encouraging Learning	1,323	1.51	0.71
15	Demonstrates Knowledge of Subject	1,321	1.29	0.52
16	Uses Variety of Teaching Methods	1,318	1.59	0.76
17	Assignments Help Learning	1,325	1.58	0.72
18	Encourages Thinking for Self	1,320	1.55	0.71
19	Informs Regularly Progress	1,318	1.92	0.86
20	Pays Attention to Comments	1,316	1.49	0.66
21	Treats me With Respect	1,324	1.30	0.58
22	Discussed Grading at Beginning	1,324	1.35	0.58
23	Starts Class on Time	1,326	1.35	0.60
Factor				
1	Focus on Individual (5,19,6,8)	1,329	6.60	2.39
2	Competence in Classroom (2,1,15)	1,330	3.78	1.26
3	Approach to Material (14,9,13,16)	1,327	6.03	2.37
4	Grading Policy (22,12)	1,325	2.80	1.09
5	Listening to Students (20,21,9)	1,328	4.20	1.52
6	Clarity on Course Objectives (4,3)	1,328	2.90	1.12
7	Fairness of Exams (11,10,12*)	1,329	4.29	1.54
8	Active Learning (17,18)	1,326	3.13	1.27
Total		1,330	33.6	10.3
	Medical Center Campus			
Item				
1	Instructor is Prepared for Class	1,283	1.34	0.53
2	Instructor Shows Interest in Subject	1,279	1.28	0.49
3	Distributed Course Objectives	1,273	1.45	0.63
4	Objectives and What is Taught Agree	1,270	1.60	0.74
5	Concerned With my Progress	1,267	1.70	0.80
6	Shows How Material Can Benefit	1,275	1.69	0.78
7	Makes Course Interesting	1,277	1.68	0.81
8	Available for Individual Help	1,271	1.62	0.74
9	Encourages Questions in Class	1,282	1.57	0.72
10	Evaluation Related to Material	1,269	1.55	0.73
11	Exams Graded Fairly	1,272	1.56	0.72
12	Grading System Clear	1,273	1.47	0.64
13	Presents Material Clearly	1,275	1.66	0.79
14	Creates Atmosphere Encouraging Learning	1,272	1.66	0.79
15	Demonstrates Knowledge of Subject	1,273	1.35	0.56
16	Uses Variety of Teaching Methods	1,266	1.65	0.77
17	Assignments Help Learning	1,273	1.75	0.77
18	Encourages Thinking for Self	1,273	1.62	0.71
19	Informs Regularly Progress	1,268	2.10	0.93
20	Pays Attention to Comments	1,269	1.64	0.74
21	Treats me With Respect	1,276	1.46	0.65
22	Discussed Grading at Beginning	1,269	1.39	0.59
23	Starts Class on Time	1,268	1.41	0.63
Factor				
1	Focus on Individual (5,19,6,8)	1,288	7.02	2.60
2	Competence in Classroom (2,1,15)	1,291	3.93	1.33
3	Approach to Material (14,9,13,16)	1,287	6.57	2.65
4	Grading Policy (22,12)	1,282	2.84	1.11
5	Listening to Students (20,21,9)	1,290	4.61	1.79
6	Clarity on Course Objectives (4,3)	1,283	3.02	1.21
7	Fairness of Exams (11,10,12*)	1,288	4.52	1.76
8	Active Learning (17,18)	1,283	3.34	1.31
Total		1,98	35.48	11.50

*Included in more than one factor.

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Table 2
(continued)

Mean Results of Fall 1990 Pilot of Student Feedback Survey

		Number	Mean	Deviation
	Homestead Campus			
Item				
1	Instructor is Prepared for Class	180	1.42	0.62
2	Instructor Shows Interest in Subject	178	1.21	0.42
3	Distributed Course Objectives	178	1.41	0.62
4	Objectives and What is Taught Agree	178	1.66	0.71
5	Concerned With my Progress	178	1.74	0.77
6	Shows How Material Can Benefit	179	1.90	0.77
7	Makes Course Interesting	178	1.98	0.93
8	Available for Individual Help	178	1.57	0.72
9	Encourages Questions in Class	179	1.55	0.76
10	Evaluation Related to Material	177	1.43	0.61
11	Exams Graded Fairly	178	1.51	0.67
12	Grading System Clear	179	1.66	0.73
13	Presents Material Clearly	176	1.78	0.82
14	Creates Atmosphere Encouraging Learning	179	1.86	0.78
15	Demonstrates Knowledge of Subject	179	1.36	0.54
16	Uses Variety of Teaching Methods	179	1.84	0.84
17	Assignments Help Learning	179	1.70	0.80
18	Encourages Thinking for Self	178	1.63	0.62
19	Informs Regularly Progress	179	2.25	0.89
20	Pays Attention to Comments	178	1.67	0.76
21	Treats me With Respect	179	1.54	0.71
22	Discussed Grading at Beginning	179	1.50	0.67
23	Starts Class on Time	179	1.37	0.65
Factor				
1	Focus on Individual (5,19,6,8)	179	7.44	2.37
2	Competence in Classroom (2,1,15)	180	3.97	1.28
3	Approach to Material (14,9,13,16)	179	7.42	2.72
4	Grading Policy (22,12)	179	3.16	1.28
5	Listening to Students (20,21,9)	179	4.76	1.94
6	Clarity on Course Objectives (4,3)	179	3.05	1.19
7	Fairness of Exams (11,10,12*)	179	4.59	1.61
8	Active Learning (17,18)	179	3.32	1.27
Total		180	37.23	11.16
	College-Wide			
Item				
1	Instructor is Prepared for Class	12,606	1.31	0.53
2	Instructor Shows Interest in Subject	12,610	1.26	0.50
3	Distributed Course Objectives	12,574	1.46	0.63
4	Objectives and What is Taught Agree	12,536	1.57	0.69
5	Concerned With my Progress	12,518	1.82	0.81
6	Shows How Material Can Benefit	12,541	1.78	0.81
7	Makes Course Interesting	12,552	1.73	0.85
8	Available for Individual Help	12,532	1.62	0.72
9	Encourages Questions in Class	12,587	1.57	0.71
10	Evaluation Related to Material	12,560	1.42	0.62
11	Exams Graded Fairly	12,539	1.51	0.69
12	Grading System Clear	12,565	1.53	0.70
13	Presents Material Clearly	12,564	1.61	0.75
14	Creates Atmosphere Encouraging Learning	12,549	1.69	0.80
15	Demonstrates Knowledge of Subject	12,556	1.32	0.55
16	Uses Variety of Teaching Methods	12,532	1.71	0.82
17	Assignments Help Learning	12,525	1.70	0.77
18	Encourages Thinking for Self	12,531	1.66	0.73
19	Informs Regularly Progress	12,449	2.23	0.93
20	Pays Attention to Comments	12,534	1.62	0.71
21	Treats me With Respect	12,552	1.42	0.64
22	Discussed Grading at Beginning	12,552	1.42	0.63
23	Starts Class on Time	12,564	1.44	0.67
Factor				
1	Focus on Individual (5,19,6,8)	12,632	7.36	2.56
2	Competence in Classroom (2,1,15)	12,641	3.86	1.29
3	Approach to Material (14,9,13,16)	12,627	6.71	2.63
4	Grading Policy (22,12)	12,614	2.93	1.17
5	Listening to Students (20,21,9)	12,629	4.57	1.71
6	Clarity on Course Objectives (4,3)	12,615	3.01	1.17
7	Fairness of Exams (11,10,12*)	12,630	4.43	1.64
8	Active Learning (17,18)	12,601	3.35	1.31
Total		12,649	36.08	10.72

*Included in more than one factor.

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Table 3

Results of Fall 1990 Pilot of Student Feedback Survey:
Items Related to Student Characteristics

	Campus											
	North		South		Wolfson		Medical Center		Homestead		College-Wide	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
24. How Often Do You Come To Class?												
Almost Always	3,447	84.8	4,868	85.2	1,097	83.2	1,160	91.3	145	81.9	10,717	85.4
Often	549	13.5	734	12.8	198	15.0	88	6.9	27	15.3	1,596	12.7
Sometimes	55	1.4	104	1.8	20	1.5	18	1.4	5	2.8	202	1.6
Almost Never	13	0.3	10	0.2	4	0.3	5	0.4	0	-	32	0.3
Total	4,064	100.0	5,716	100.0	1,319	100.0	1,271	100.0	177	100.0	12,547	100.0
Missing = 182												
25. How Often Are You Prepared For Class?												
Almost Always	2,647	65.0	3,611	63.1	753	57.0	729	57.3	136	76.4	7,876	62.7
Often	1,163	28.6	1,696	29.7	469	35.5	438	34.4	35	19.7	3,801	30.3
Sometimes	240	5.9	365	6.4	91	6.9	96	7.6	7	3.9	799	6.3
Almost Never	20	0.5	46	0.8	8	0.6	9	0.7	0	-	83	0.7
Total	4,070	100.0	5,718	100.0	1,321	100.0	1,272	100.0	178	100.0	12,559	100.0
Missing = 170												
26. How Often Do You Pay Attention In Class?												
Almost Always	2,875	70.8	3,959	69.6	1,024	77.6	992	78.2	123	69.9	8,973	71.7
Often	987	24.3	1,409	24.8	262	19.9	229	18.0	37	21.0	2,924	23.4
Sometimes	160	3.9	254	4.4	23	1.7	37	2.9	15	8.5	489	3.9
Almost Never	39	1.0	67	1.2	10	0.8	11	0.9	1	0.6	128	1.0
Total	4,061	100.0	5,689	100.0	1,319	100.0	1,269	100.0	176	100.0	12,514	100.0
Missing = 215												

Table 3
(continued)

Results of Fall 1990 Pilot of Student Feedback Survey:
Items Related to Student Characteristics

	Campus											
	North		South		Wolfson		Medical Center		Homestead		College-Wide	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
27. How Often Are You Late For Class?												
Almost Always	279	7.1	345	6.3	85	6.7	81	6.5	4	2.3	794	6.5
Often	377	9.6	416	7.6	106	8.4	75	6.1	15	8.8	989	8.2
Sometimes	827	21.2	885	16.1	257	20.3	188	15.2	25	14.6	2,182	18.1
Almost Never	2,425	62.1	3,853	70.0	816	64.6	892	72.2	127	74.3	8,113	67.2
Total	3,908	100.0	5,499	100.0	1,264	100.0	1,236	100.0	171	100.0	12,078	100.0
Missing = 651												
28. So Far, How Would You Rate Your Performance In This Class?												
Excellent	794	19.5	972	17.0	278	21.0	226	17.8	43	24.3	2,313	18.4
Good	2,089	51.3	2,839	49.7	690	52.3	694	54.7	85	48.0	6,397	51.0
Fair	968	23.8	1,502	26.3	286	21.7	273	21.5	38	21.5	3,067	24.4
Poor	172	4.2	338	5.9	53	4.0	70	5.5	8	4.5	641	5.1
Don't Know	51	1.2	61	1.1	13	1.0	6	0.5	3	1.7	134	1.1
Total	4,074	100.0	5,712	100.0	1,320	100.0	1,269	100.0	177	100.0	12,552	100.0
Missing = 177												
29. How Difficult Is This Course Compared To Other Courses You Have Taken?												
More Difficult	924	22.7	1,743	30.6	404	30.8	512	40.1	56	31.6	3,639	29.0
About the Same	1,984	48.8	2,852	50.0	715	54.4	591	46.2	80	45.2	6,222	49.7
Less Difficult	1,156	28.5	1,103	19.4	195	14.8	175	13.7	41	23.2	2,670	21.3
Total	4,064	100.0	5,698	100.0	1,314	100.0	1,278	100.0	177	100.0	12,531	100.0
Missing = 198												

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Table 3
(continued)

Results of Fall 1990 Pilot of Student Feedback Survey:
Items Related to Student Characteristics

	Campus											
	North		South		Wolfson		Medical Center		Homestead		College-Wide	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
30. How Does The Amount Of Work In This Course Compare To The Amount In Other Courses You Have Taken?												
Greater	936	23.1	1,556	27.3	375	28.5	521	41.0	57	32.2	3,445	27.5
About the Same	2,292	56.5	3,169	55.7	800	60.8	628	49.4	102	57.6	6,991	55.9
Less	828	20.4	969	17.0	140	10.7	122	9.6	18	10.2	2,077	16.6
Total	4,056	100.0	5,694	100.0	1,315	100.0	1,271	100.0	177	100.0	12,513	100.0
Missing = 216												
31. What Do You Think About The Number Of Students In This Class?												
Too Many	543	13.4	1,072	18.8	148	11.2	335	26.3	13	7.3	2,111	16.9
Right Number	3,367	83.0	4,468	78.3	1,097	83.3	917	72.0	156	88.2	10,005	79.8
Too Few	148	3.6	168	2.9	72	5.5	22	1.7	8	4.5	418	3.3
Total	4,058	100.0	5,708	100.0	1,317	100.0	1,274	100.0	177	100.0	12,534	100.0
Missing = 195												
32. Why Are You Taking This Course?												
Requirement	2,806	69.5	3,947	69.6	900	68.4	1,046	83.4	139	78.5	8,838	70.9
Elective	523	12.9	836	14.7	187	14.2	60	4.8	17	9.6	1,623	13.0
Upgrade Skills	168	4.2	188	3.3	83	6.3	93	7.4	8	4.5	540	4.3
Personal Interest	323	8.0	459	8.1	107	8.1	28	2.2	9	5.1	926	7.5
Other	220	5.4	245	4.3	39	3.0	28	2.2	4	2.3	536	4.3
Total	4,040	100.0	5,675	100.0	1,316	100.0	1,255	100.0	177	100.0	12,463	100.0
Missing = 266												

Table 3
(continued)

Results of Fall 1990 Pilot of Student Feedback Survey:
Items Related to Student Characteristics

	Campus											
	North		South		Wolfson		Medical Center		Homestead		College-Wide	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
33. Have You Registered For This Course Before?												
Yes	578	14.3	816	14.4	252	19.2	120	9.6	26	14.6	1,792	14.4
No	3,469	85.7	4,870	85.6	1,061	80.8	1,137	90.4	152	85.4	10,689	85.6
Total	4,047	100.0	5,686	100.0	1,313	100.0	1,257	100.0	178	100.0	12,481	100.0
Missing = 248												
34. I Am A												
Male	1,694	42.2	2,520	44.5	503	38.7	289	23.2	50	28.3	5,056	40.8
Female	2,323	57.8	3,143	55.5	798	61.3	958	76.8	127	71.7	7,349	59.2
Total	4,017	100.0	5,663	100.0	1,301	100.0	1,247	100.0	177	100.0	12,405	100.0
Missing = 324												
35. How Old Are You?												
18 or Under	862	21.3	1,147	20.2	163	12.4	47	3.7	41	23.0	2,260	18.1
19 - 24	2,308	57.0	3,528	62.1	710	54.0	518	41.3	85	47.8	7,149	57.3
25 - 31	521	12.9	604	10.6	228	17.4	369	29.4	20	11.2	1,742	14.0
32 - 40	241	5.9	269	4.7	142	10.8	234	18.6	19	10.7	905	7.2
41 or Over	118	2.9	137	2.4	71	5.4	88	7.0	13	7.3	427	3.4
Total	4,050	100.0	5,685	100.0	1,314	100.0	1,256	100.0	178	100.0	12,483	100.0
Missing = 246												

Table 3
(continued)

Results of Fall 1990 Pilot of Student Feedback Survey:
Items Related to Student Characteristics

	Campus											
	North		South		Wolfson		Medical Center		Homestead		College-Wide	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
36. Please Indicate How You Identify Yourself												
American Indian	86	2.1	120	2.1	35	2.7	14	1.1	6	3.4	261	2.1
Asian	231	5.7	240	4.2	49	3.8	62	5.0	6	3.4	588	4.8
Black	1,334	33.2	394	7.0	174	13.3	372	29.8	22	12.4	2,296	18.5
White	1,495	37.2	3,744	66.4	721	55.3	597	47.8	114	64.4	6,671	53.8
Other	879	21.8	1,143	20.3	324	24.9	204	16.3	29	16.4	2,579	20.8
Total	4,025	100.0	5,641	100.0	1,303	100.0	1,249	100.0	177	100.0	12,395	100.0
Missing = 334												
37. Is Your Ethnic Heritage Hispanic?												
Yes	1,757	43.7	3,381	60.2	912	70.8	439	35.2	45	25.4	6,534	52.9
No	2,262	56.3	2,238	39.8	376	29.2	807	64.8	132	74.6	5,815	47.1
Total	4,019	100.0	5,619	100.0	1,288	100.0	1,246	100.0	177	100.0	12,349	100.0
Missing = 380												
38. Do You Have Family Commitments That Interfere With How Well You Do In Class?												
Yes	1,173	29.8	1,569	28.4	442	34.6	558	45.2	60	35.3	3,802	31.3
No	2,765	70.2	3,965	71.6	837	65.4	678	54.8	110	64.7	8,355	68.7
Total	3,938	100.0	5,534	100.0	1,279	100.0	1,236	100.0	170	100.0	12,157	100.0
Missing = 572												

Table 3
(continued)

Results of Fall 1990 Pilot of Student Feedback Survey:
Items Related to Student Characteristics

	Campus											
	North		South		Wolfson		Medical Center		Homestead		College-Wide	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
39. How Many Hours Per Week Do You Usually Work At Your Job?												
No Job	1,007	25.0	1,379	24.3	393	30.0	350	27.7	46	26.0	3,175	25.5
1 - 20 Hours	914	22.6	1,409	24.8	263	20.0	311	24.6	45	25.4	2,942	23.6
21 - 30 Hours	921	22.8	1,443	25.4	214	16.3	219	17.4	45	25.4	2,842	22.8
31 - 40 Hours	795	19.7	948	16.7	262	20.0	276	21.9	30	17.0	2,311	18.5
More Than 40 Hours	400	9.9	496	8.8	180	13.7	106	8.4	11	6.2	1,193	9.6
Total	4,037	100.0	5,675	100.0	1,312	100.0	1,262	100.0	177	100.0	12,463	100.0
Missing = 266												
40. How Many Credits Are You Taking This Semester?												
11 or Less Credits	1,407	34.9	2,200	38.8	459	35.1	459	36.3	92	52.0	4,617	37.1
12 or More Credits	2,628	65.1	3,467	61.2	850	64.9	804	63.7	85	48.0	7,834	62.9
Total	4,035	100.0	5,667	100.0	1,309	100.0	1,263	100.0	177	100.0	12,451	100.0
Missing = 278												
41. Have You Taken A Course With This Instructor Before?												
Yes	462	11.4	506	8.9	249	18.9	214	17.0	6	3.4	1,437	11.5
No	3,556	88.0	5,145	90.6	1,052	79.9	1,041	82.9	171	96.1	10,965	87.9
Don't Remember	24	0.6	28	0.5	15	1.2	1	0.1	1	0.5	69	0.6
Total	4,042	100.0	5,679	100.0	1,316	100.0	1,256	100.0	178	100.0	12,471	100.0
Missing = 258												

AB042.2

Table 4

Factor Results of Fall Term Student Feedback Survey
Based on Weightings of .30 or Above

Factor 1: Focus on the Individual

.78 Concerned with my progress (Item 5)
.60 Informs regularly about progress (Item 19)
.39 Shows how material can benefit outside class (Item 6)
.34 Available for individual help (Item 8)

Factor 2: Competence in Classroom

.70 Instructor shows interest in subject (Item 2)
.56 Instructor is prepared for class (Item 1)
.50 Demonstrates knowledge of subject (Item 15)

Factor 3: Approach to Material

.75 Creates atmosphere encouraging learning (Item 14)
.74 Makes course interesting (Item 7)
.45 Presents material clearly (Item 13)
.32 Uses variety of teaching methods (Item 16)

Factor 4: Grading Policy

.78 Discussed grading at beginning (Item 22)
.53 Grading system was clear (Item 12)*

Factor 5: Listening to Students

.68 Pays attention to comments (Item 20)
.60 Treats me with respect (Item 21)
.32 Encourages questions in class (Item 9)

Factor 6: Clarity on Course Objectives

.76 Objectives and what is taught agree (Item 4)
.55 Distributed course objectives (Item 3)

Factor 7: Fairness of Exams

.78 Exams graded fairly (Item 11)
.36 Evaluation related to material (Item 10)
.31 Grading system clear (Item 12)*

Factor 8: Active Learning

.52 Assignments help learning (Item 17)
.49 Encourages thinking for self (Item 18)

*This item is included in more than one factor.

Note: Item 23 (Starts class on time) did not load above .30 on any factor. The greatest weight was .24 on factor 2.

Table 5

Inter-Factor Correlations and Factor Weights

	1	2	3	4	5	6	7	8
1	-	47	65	44	61	50	49	54
2		-	66	46	58	66	56	49
3			-	46	64	60	59	64
4				-	51	51	58	47
5					-	52	58	63
6						-	61	54
7							-	55
8								-

Unique Variance Attributed to Each Factor

Weighted	1.86	1.14	1.72	1.52	1.09	1.18	1.10	.65
Unweighted	.71	.54	.55	.58	.44	.43	.40	.31
Percent of Weighted Total	5.9	3.4	5.4	4.8	3.4	3.7	3.5	2.0

Total Variance Attributed to Each Factor

Weighted	15.62	15.18	18.79	11.42	16.01	14.79	14.21	13.63
Unweighted	6.22	6.28	7.38	4.62	6.48	5.94	5.68	5.63
Percent of Weighted Total	49.1	47.7	59.1	35.9	50.3	46.5	44.7	42.8

Total communality: Weighted = 31.82 / Unweighted = 12.66

AB042.4

Table 6

Inter-Item Correlation Matrix
Items 1-23
Fall 1990, Student Feedback Data

N= 11,623

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	-	53	45	48	37	37	46	35	37	41	37	37	50	45	47	34	35	35	27	39	39	34	37
2		-	43	44	40	41	49	37	40	41	36	34	46	47	50	35	31	36	26	40	39	30	26
3			-	58	38	35	40	35	35	41	38	39	46	42	40	32	34	35	29	37	33	36	26
4				-	43	41	47	40	39	50	44	41	53	48	44	36	42	40	33	42	39	37	28
5					-	55	54	52	46	37	40	40	49	53	34	40	45	49	58	52	46	32	25
6						-	57	42	44	36	36	37	48	53	37	41	41	46	44	47	39	30	22
7							-	47	49	42	41	41	61	71	44	48	45	48	44	50	45	33	28
8								-	46	39	37	38	44	46	35	35	41	43	42	49	43	32	29
9									-	43	38	37	48	52	39	38	41	46	38	54	46	31	25
10										-	52	42	50	45	43	32	41	39	29	41	40	36	28
11											-	54	47	44	40	34	38	37	33	44	42	38	28
12												-	48	43	38	33	38	37	38	42	40	58	28
13													-	65	47	45	48	47	42	51	46	39	33
14														-	47	49	49	52	45	55	49	35	29
15															-	37	36	41	26	41	40	35	30
16																-	39	40	38	39	35	29	24
17																	-	52	43	44	39	34	25
18																		-	45	51	42	32	26
19																			-	49	37	32	24
20																				-	59	37	30
21																					-	40	33
22																						-	33
23																							-
Communality	.51	.57	.50	.69	.71	.49	.70	.43	.46	.49	.67	.61	.61	.73	.48	.36	.51	.54	.52	.67	.54	.64	.23
Weight	2.03	2.32	1.99	3.20	3.40	1.95	3.37	1.75	1.85	1.95	3.01	2.57	2.53	3.73	1.92	1.57	2.06	2.19	2.09	3.04	2.19	2.78	1.30

AB042.3

Table 7

Analysis of Variance and Group Means for Item 28:
Performance in Class N = 12,491

Group 1:	Excellent Performance	N = 2,305
Group 2:	Good Performance	N = 6,376
Group 3:	Fair Performance	N = 3,043
Group 4:	Poor Performance	N = 635
Group 5:	Don't Know Performance	N = 132

	Dependent Variable	F-Ratio	R^2	r	p <.01
1:	Focus on Individual	324.86	.094	.31	*
2:	Competence in Classroom	87.39	.027	.16	*
3:	Approach to Material	264.26	.078	.28	*
4:	Grading Policy	114.98	.036	.19	*
5:	Listening to Students	168.39	.051	.23	*
6:	Clarity on Course Objectives	145.96	.045	.21	*
7:	Fairness of Exams	203.52	.061	.25	*
8:	Active Learning	200.75	.060	.24	*

Means by Group and Factor

Group	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6	Factor 7	Factor 8
1: Excellent	0.42	0.21	0.36	0.26	0.32	0.29	0.35	0.34
2: Good	0.09	0.04	0.09	0.04	0.05	0.05	0.06	0.07
3: Fair	-0.34	-0.17	-0.28	-0.18	-0.24	-0.22	-0.25	-0.26
4: Poor	-0.70	-0.38	-0.74	-0.40	-0.50	-0.47	-0.53	-0.58
5: Don't Know	-0.62	-0.58	-0.65	-0.73	-0.61	-0.63	-0.76	-0.53

Statistically Significant Mean Differences

1-2	1-2	1-2	All	1-2	1-2	1-2	1-2
1-3	1-3	1-3		1-3	1-3	1-3	1-3
1-4	1-4	1-4		1-4	1-4	1-4	1-4
1-5	1-5	1-5		1-5	1-5	1-5	1-5
2-3	2-3	2-3		2-3	2-3	2-3	2-3
2-4	2-4	2-4		2-4	2-4	2-4	2-4
2-5	2-5	2-5		2-5	2-5	2-5	2-5
3-4	3-4	3-4		3-4	3-4	3-4	3-4
3-5	3-5	3-5		3-5	3-5	3-5	3-5

Educationally Significant Mean Differences

1-3	1-4	1-3	1-4	1-3	1-3	1-3	1-3
1-4	1-5	1-4	1-5	1-4	1-4	1-4	1-4
1-5	2-5	1-5	2-5	1-5	1-5	1-5	1-5
2-4		2-4	3-5	2-4	2-4	2-4	2-4
2-5		2-5		2-5	2-5	2-5	2-5
				3-5		3-5	

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Table 8

Analysis of Variance and Group Means for Item 29: Difficulty of Course Compared to Others N = 12,468

Group 1: More Difficult N = 3,613
Group 2: About the Same N = 6,205
Group 3: Less Difficult N = 2,650

	Dependent Variable	F-Ratio	R^2	r	p <.01
1:	Focus on Individual	95.79	.015	.12	*
2:	Competence in Classroom	11.75	.002	.04	*
3:	Approach to Material	193.76	.030	.17	*
4:	Grading Policy	35.56	.006	.08	*
5:	Listening to Students	77.22	.012	.11	*
6:	Clarity on Course Objectives	48.26	.008	.09	*
7:	Fairness of Exams	118.23	.019	.14	*
8:	Active Learning	38.11	.006	.08	*

Group	Means by Group and Factor							
	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6	Factor 7	Factor 8
1: More Diff.	-0.19	-0.07	-0.27	-0.12	-0.18	-0.14	-0.21	-0.12
2: Same	0.06	0.03	0.09	0.05	0.05	0.06	0.08	0.06
3: Less Diff.	0.10	0.00	0.15	0.02	0.10	0.05	0.10	0.04
Statistically Significant Mean Differences								
	1-2 1-3	1-2 1-3	All	1-2 1-3	1-2 1-3	1-2 1-3	1-2 1-3	1-2 1-3
Educationally Significant Mean Differences								
	none	none	none	none	none	none	none	none

AB042.6

Table 9

Analysis of Variance and Group Means for Item 30:
Amount of Work Compared to Other Courses N = 12,454

Group 1: More Work in This Course N = 3,428
Group 2: About the Same Amount N = 6,963
Group 3: Less Work in This Course N = 2,063

	Dependent Variable	F-Ratio	R^2	r	p <.01
1:	Focus on Individual	47.01	.007	.08	*
2:	Competence in Classroom	20.33	.003	.05	*
3:	Approach to Material	30.18	.005	.07	*
4:	Grading Policy	29.25	.005	.07	*
5:	Listening to Students	18.01	.003	.05	*
6:	Clarity on Course Objectives	31.58	.005	.07	*
7:	Fairness of Exams	40.32	.006	.08	*
8:	Active Learning	95.11	.015	.12	*

Means by Group and Factor

Group	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6	Factor 7	Factor 8
1: More work	0.00	-0.01	-0.07	-0.04	-0.05	-0.06	-0.11	0.07
2: Same	0.05	0.03	0.06	0.05	0.04	0.06	0.07	0.06
3: Less work	-0.19	-0.13	-0.09	-0.12	-0.09	-0.11	-0.04	-0.27

Statistically Significant Mean Differences

All	3-1	2-3	All	2-3	2-3	All	3-2
	3-2	2-1		2-1	2-1		3-1

Educationally Significant Mean Differences

none	none	none	none	none	none	none	none

AB042.6

Table 10

Analysis of Variance and Group Means for Item 31:
Number of Students in Class N = 12,475

Group 1: Too Many N = 2,096
Group 2: Right Number N = 9,965
Group 3: Too Few N = 414

	Dependent Variable	F-Ratio	R^2	r	p <.01
1:	Focus on Individual	29.27	.005	.07	*
2:	Competence in Classroom	42.52	.007	.08	*
3:	Approach to Material	41.99	.007	.08	*
4:	Grading Policy	37.20	.006	.08	*
5:	Listening to Students	48.10	.008	.09	*
6:	Clarity on Course Objectives	36.85	.006	.08	*
7:	Fairness of Exams	41.33	.007	.08	*
8:	Active Learning	16.63	.003	.05	*

Means by Group and Factor

Group	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6	Factor 7	Factor 8
1: Too many	-0.12	-0.03	-0.10	-0.05	-0.15	-0.05	-0.07	-0.09
2: Right No.	0.03	0.01	0.03	0.02	0.04	0.02	0.03	0.03
3: Too few	-0.23	-0.44	-0.35	-0.39	-0.29	-0.39	-0.40	-0.13

Statistically Significant Mean Differences

1-2 2-3	1-3 2-3	All	All	All	All	All	1-2 2-3

Educationally Significant Mean Differences

none	none	none	none	none	none	none	none

AB042.6

Table 11

Analysis of Variance and Group Means for Size of Course (at End of Semester) N = 640 Sections

Size 1:	10 or Less Students	N = 34
Size 2:	11 - 20 Students	N = 200
Size 3:	21 - 30 Students	N = 229
Size 4:	31 - 40 Students	N = 114
Size 5:	More Than 40 Students	N = 63

	Dependent Variable	F-Ratio	R^2	r	p <.01
1:	Focus on Individual	7.04	.042	.20	*
2:	Competence in Classroom	1.00	.006	.07	
3:	Approach to Material	2.96	.018	.13	
4:	Grading Policy	0.94	.006	.07	
5:	Listening to Students	5.53	.034	.18	*
6:	Clarity on Course Objectives	2.26	.014	.12	
7:	Fairness of Exams	1.07	.007	.08	
8:	Active Learning	10.74	.063	.25	*

Means by Group and Factor

Size		Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6	Factor 7	Factor 8
1:	10 or less	0.51	-0.08	0.26	-0.16	0.52	0.06	-0.12	0.50
2:	11 - 20	0.15	0.00	0.12	-0.04	0.11	0.04	0.00	0.25
3:	21 - 30	0.01	0.01	-0.03	-0.01	0.01	0.04	0.00	0.02
4:	31 - 40	-0.33	-0.09	-0.24	0.02	-0.27	-0.25	-0.08	-0.38
5:	40 +	-0.14	0.21	0.01	0.20	-0.15	0.12	0.22	-0.23

Statistically Significant Mean Differences

4-3	none	none	none	1-4	none	none	4-3
4-2				1-5			4-2
4-1				1-3			4-1
5-1				2-4			5-2
3-1							5-1
							3-2
							3-1

Educationally Significant Mean Differences

none	none	none	none	none	none	none	none

AB042.6

Table 12

Analysis of Variance and Group Means for Item 32:
Reasons for Taking Course N = 12,403

Group 1:	Requirement for Degree	N = 8,794
Group 2:	Elective for Degree	N = 1,618
Group 3:	Upgrade Job Skills	N = 537
Group 4:	Personal Interest	N = 921
Group 5:	Other Reasons	N = 533

	Dependent Variable	F-Ratio	R^2	r	p <.01
1:	Focus on Individual	22.46	.007	.08	*
2:	Competence in Classroom	8.24	.003	.05	*
3:	Approach to Material	17.60	.006	.08	*
4:	Grading Policy	4.97	.002	.04	*
5:	Listening to Students	6.74	.002	.04	*
6:	Clarity on Course Objectives	4.73	.002	.04	*
7:	Fairness of Exams	5.86	.002	.04	*
8:	Active Learning	5.70	.002	.04	*

Means by Group and Factor

Group	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6	Factor 7	Factor 8
1: Requirement	-0.05	-0.01	-0.04	0.01	-0.02	-0.01	0.00	-0.02
2: Elective	0.03	-0.04	0.04	-0.06	-0.02	0.01	-0.01	0.01
3: Upgrade	0.22	-0.08	0.04	0.00	0.04	-0.11	-0.11	0.11
4: Personal	0.21	0.13	0.24	0.00	0.15	0.09	0.11	0.12
5: Other	0.03	-0.16	-0.07	-0.15	-0.06	-0.10	-0.11	-0.01

Statistically Significant Mean Differences

1-2	1-4	1-2	1-2	4-1	3-4	4-1	1-3
1-3	2-4	1-4	1-5	4-2	5-4	4-2	1-4
1-4	3-4	2-4	4-5	4-5		4-3	
5-4	4-5	3-4				4-5	
5-3	1-5	5-4					
2-4							
2-3							

Educationally Significant Mean Differences

none	none	none	none	none	none	none	none

AB042.6

Table 13

Analysis of Variance for Time of Course
N = 627 Sections

Time 1:	Early Morning (7:00 - 8:00 a.m.)	N = 164
Time 2:	Morning (8:01 - 11:00 a.m.)	N = 239
Time 3:	Lunch hour (11:01 a.m. - 12:59 p.m.)	N = 77
Time 4:	Afternoon (1:00 - 4:59 p.m.)	N = 73
Time 5:	Evening (5:00 p.m. or later)	N = 74

	Dependent Variable	F-Ratio	R^2	r	p <.01
1:	Focus on Individual	0.11	.000	.00	
2:	Competence in Classroom	0.11	.001	.03	
3:	Approach to Material	0.41	.003	.05	
4:	Grading Policy	1.44	.009	.09	
5:	Listening to Students	0.99	.006	.08	
6:	Clarity on Course Objectives	0.31	.002	.04	
7:	Fairness of Exams	0.19	.001	.03	
8:	Active Learning	0.30	.002	.04	

Means by Group and Factor

Time	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6	Factor 7	Factor 8
Early	0.00	-0.01	0.03	-0.09	0.05	0.02	-0.03	-0.04
Morning	0.03	-0.01	0.01	0.03	-0.03	-0.01	0.00	0.02
Lunch	-0.03	-0.02	-0.01	-0.14	0.01	0.06	0.03	0.03
Afternoon	-0.04	0.04	-0.12	0.04	-0.12	0.08	0.04	0.08
Evening	-0.03	0.06	0.07	0.19	0.17	-0.07	0.08	-0.06

AB042.6

Table 14

Analysis of Variance and Group Means for Instructor Rank
N = 627 Sections

Rank 1	Professor	N = 264
Rank 2	Associate Professor, Sr.	N = 117
Rank 3	Assistant Professor	N = 79
Rank 4	Instructor	N = 64
Rank 5	Associate Professor	N = 102

Dependent Variable	F-Ratio	R^2	r	p <.01
1: Focus on Individual	14.56	.086	.29	*
2: Competence in Classroom	1.29	.008	.09	
3: Approach to Material	5.47	.034	.18	*
4: Grading Policy	2.79	.018	.13	
5: Listening to Students	6.45	.040	.20	*
6: Clarity on Course Objectives	1.94	.012	.11	
7: Fairness of Exams	2.26	.014	.12	
8: Active Learning	7.28	.045	.21	*

Means by Group and Factor

Group	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6	Factor 7	Factor 8
1: Professor	-0.27	-0.02	-0.16	-0.06	-0.15	-0.05	0.00	-0.16
2: Asso. Sr.	-0.02	-0.04	-0.01	0.01	-0.07	-0.03	-0.03	-0.02
3: Assistant	0.50	0.22	0.32	0.21	0.37	0.19	0.21	0.43
4: Instructor	0.47	0.08	0.31	0.23	0.34	0.22	0.17	0.32
5: Associate	0.00	-0.07	-0.03	-0.19	0.00	-0.09	-0.19	-0.07

Statistically Significant Mean Differences

4-1	none	1-4	none	1-4	none	none	3-2
4-2		1-3		1-3			3-5
4-5				2-3			3-1
3-1							4-1
3-2							
3-5							

Educationally Significant Mean Differences

4-1	none	none	none	1-3	none	none	3-5
3-1							3-1
3-2							
3-5							

AB042.6

Table 15

Analysis of Variance for Subject Matter
N = 309 Sections

APB	Applied Biology	N = 21
CHM	Chemistry	N = 20
ENC	English	N = 94
ENS	English as a Second Language	N = 33
HUM	Humanities	N = 24
MAC	Mathematics-Calculus & Pre-Calculus	N = 32
MAT	Mathematics	N = 30
NUR	Nursing	N = 35
PSY	Psychology	N = 20

	Dependent Variable	F-Ratio	R^2	r	p <.01
1:	Focus on Individual	9.06	.19	.44	*
2:	Competence in Classroom	0.50	.01	.10	
3:	Approach to Material	1.89	.05	.22	
4:	Grading Policy	2.37	.06	.25	
5:	Listening to Students	1.93	.05	.22	
6:	Clarity on Course Objectives	1.23	.03	.17	
7:	Fairness of Exams	3.30	.08	.28	*
8:	Active Learning	6.92	.16	.40	*

Means by Group and Factor

Subject	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6	Factor 7	Factor 8
APB	-0.52	-0.10	-0.52	-0.07	-0.43	-0.37	-0.36	-0.91
CHM	-0.23	0.23	-0.12	0.37	-0.30	0.41	0.33	0.04
ENC	0.19	-0.50	0.05	-0.31	0.00	0.02	-0.28	0.10
ENS	0.69	0.00	0.32	0.24	0.40	-0.02	0.13	0.48
HUM	-0.52	-0.05	0.02	-0.10	-0.22	-0.18	0.08	-0.68
MAC	-0.67	-0.16	-0.31	0.09	-0.07	-0.06	0.24	0.11
MAT	-0.25	0.01	-0.06	0.23	0.06	0.13	0.43	0.33
NUR	0.57	0.02	0.24	0.08	0.26	-0.10	-0.19	0.17
PSY	-0.20	0.29	0.05	0.34	-0.11	0.30	0.40	-0.55

Statistically Significant Mean Differences

	ENS-MAC	none	none	none	none	none	ENC-MAT	APB-CHM
	ENS-APB							APB-ENC
	ENS-HUM							APB-MAC
	ENS-MAT							APB-NUR
	ENS-CHM							APB-MAT
	ENS-PSY							APB-ENS
	NUR-MAC							HUM-ENC
	NUR-APB							HUM-MAC
	NUR-HUM							HUM-NUR
	NUR-MAT							HUM-MAT
	ENC-MAC							HUM-ENS
	ENC-APB							PSY-MAT
	ENC-HUM							PSY-ENS

Educationally Significant Mean Differences

same	none	none	none	none	none	same	same

Table 16

Results of Fall 1990 Pilot of Student Feedback Survey:
Items Related to Reactions to Survey

	Campus											
	North		South		Wolfson		Medical Center		Homestead		College-Wide	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
42. This Questionnaire Is												
Too Long	1,136	28.1	1,767	31.2	461	35.2	477	38.0	62	34.8	3,903	31.4
About Right	2,798	69.4	3,766	66.5	819	62.6	754	60.1	115	64.6	8,252	66.3
Too Short	100	2.5	133	2.3	29	2.2	24	1.9	1	0.6	287	2.3
Total	4,034	100.0	5,666	100.0	1,309	100.0	1,255	100.0	178	100.0	12,442	100.0
Missing = 287												
43. This Questionnaire Was												
Easy	3,826	97.7	5,420	98.3	1,215	96.3	1,186	97.9	170	98.8	11,817	97.9
Hard	89	2.3	96	1.7	47	3.7	26	2.1	2	1.2	260	2.1
Total	3,915	100.0	5,516	100.0	1,262	100.0	1,212	100.0	172	100.0	12,077	100.0
Missing = 652												

Table 17

Sample of Student Comments About Questionnaire

Content of Comment	Number
• Easy to understand - Okay the way it is	269
• Too long/too many questions	99
• Asks too many personal questions about respondent	61
• Race identification of respondent is unnecessary	24
• Add more questions concerning instructor's performance	25
• Add questions regarding course content and purpose	11
• Should ask questions about instruction materials	7
• Include questions regarding instructor's evaluation of students	1
• Add questions regarding students' behavior	2
• Include questions about facilities	1
• Wording should be so that it applies to any situation (not all questions pertain to all class situations)	18
• Need more "in-between" choices for answers	12
• Add a choice "not applicable" for questions 1-23	7
• First 23 questions need to be amended to give a more fair rating of instructors	1
• Questions need to be more direct and concise	13
• Difficult to understand	11
• Need to improve answer sheet	2
• Wording is too formal.	1
• Add "Would you take another class w/this instruct :"?	2
• Question 10 was difficult to understand	1
• Where is #44?	18
• Questions at end are out of sequence	2
• Too redundant	11
• Instructor could easily identify student by the handwriting on the last page	3
• Students felt the questionnaire was a waste of their time	9

Student Feedback Questionnaire

This questionnaire gives you the opportunity to express your views on how this course has been taught. Please read each item very carefully. This survey is ANONYMOUS and individual responses will be kept CONFIDENTIAL. No results will be given to the instructor until AFTER your final grade has been submitted.

Instructions:
Mark your response to each item by darkening or bubbling in the desired choice on the ANSWER SHEET provided.

Please bubble in the 3 digit location code under the ***Identification Number*** columns A, B, C, and the 5 digit course sequence number under columns D, E, F, G, H. Put a zero (0) under column I and a one (1) under J.

Please use the following scale to respond to items 1 to 23

A = Strongly agree	You strongly agree with the statement as it applies to this instructor.
B = Agree	You agree more than you disagree with the statement as it applies to this instructor.
C = Disagree	You disagree more than you agree with the statement as it applies to this instructor.
D = Strongly disagree	You strongly disagree with the statement as it applies to this instructor.

1. The instructor is prepared for class.
2. The instructor shows interest in the subject.
3. The instructor distributed the course objectives/ competencies.
4. There is agreement between the objectives/ competencies of this course and what is taught.
5. The instructor is concerned with my progress.
6. The instructor shows me how the course material can benefit me beyond the classroom.
7. The instructor makes this course interesting.
8. The instructor is available for individual help.
9. The instructor encourages questions in class.
10. The examinations and/or other forms of evaluation are related to the course material.
11. The examinations and/or other forms of evaluation are graded fairly.
12. The instructor made the grading system clear to me.
13. The instructor presents course material clearly.
14. The instructor creates a classroom atmosphere that encourages me to learn.
15. The instructor demonstrates knowledge of the subject.
16. The instructor uses a variety of teaching methods (for example, lecture, discussions, demonstrations, audiovisual aids and/or others).
17. Assignments help me learn the course material.
18. The instructor encourages me to think for myself.
19. The instructor informs me regularly about my progress.
20. The instructor pays attention to my comments.
21. The instructor treats me with respect.
22. The instructor discussed the grading system at the beginning of the semester.
23. The instructor starts class on time.

Please use the following scale to respond to items 24 to 27

A = Always or almost always
B = Often
C = Sometimes
D = Never or almost never

24. How often do you come to class?
25. How often are you prepared for class?
26. How often do you pay attention in class?
27. How often are you late for class?

Continue on the back of this page

28. So far, how would you rate your performance in this class?
    A. Excellent
    B. Good
    C. Fair
    D. Poor
    E. Don't know

29. How difficult is this course compared to other courses you have taken?
    A. More difficult
    B. About the same
    C. Less difficult

30. How does the amount of work in this course compare to the amount in other courses you have taken?
    A. The amount of work is greater
    B. The amount of work is about the same
    C. The amount of work is less

31. What do you think about the number of students in this class?
    A. Too many students
    B. The right number of students
    C. Too few students

32. Why are you taking this course?
    A. As a requirement for a degree
    B. As an elective for a degree
    C. To upgrade my job skills
    D. For personal interest
    E. For other reasons not listed above

33. Have you registered for this course before?
    A. Yes
    B. No

34. I am a
    A. Male
    B. Female

35. How old are you?
    A. 18 or under
    B. 19 to 24
    C. 25 to 31
    D. 32 to 40
    E. 41 or over

36. Please indicate how you identify yourself
    A. American Indian or Alaskan native
    B. Asian or Pacific islander
    C. Black
    D. White
    E. Other

37. Is your ethnic heritage Hispanic?
    A. Yes
    B. No

38. Do you have family commitments that interfere with how well you do in class?
    A. Yes
    B. No

39. How many hours per week do you usually work at your job?
    A. I don't have a job
    B. 1 to 20 hours per week
    C. 21 to 30 hours per week
    D. 31 to 40 hours per week
    E. more than 40 hours per week

40. How many credits are you taking this semester?
    A. 11 or fewer
    B. 12 or more

41. Have you taken a course with this instructor before?
    A. Yes
    B. No
    C. I don't remember

42. This questionnaire is
    A. Too long
    B. About the right length
    C. Too short

43. This questionnaire was
    A. Easy to understand
    B. Hard to understand

47. On the lines below, please make any SUGGESTIONS you have on the QUESTIONNAIRE itself such as areas you would like to see in the future or changes in wording that may make it easier to understand.

_____

_____

_____

Questionnaire continues on the next page

Appendix B
Details on Methodology

Factor Analysis

The purpose of the factor analysis was to find the common factor(s) underlying the Student Feedback Survey. The Statistical Analysis System (SAS) and maximum-likelihood (ML) method (see Lawley & Maxwell, 1971) were used to obtain the estimates and to test hypotheses about the number of common factors to be retained. Prior to running the factor analysis, the raw data were transformed to a correlation matrix to save computer time. In this step, data for respondents who left blank one or more of the 23 items were eliminated from further analysis. This reduced the data to 11,794 observations.

The method for establishing the prior communality estimates involved setting the estimate for each variable to its squared multiple correlation with all other variables. Both orthogonal and oblique rotations of the factors were employed. After factors were extracted using the Maximum Likelihood Method, they were prerotated using Varimax. This was followed by the Promax rotation. The resulting standardized regression coefficients from the rotated factor pattern were reported and discussed in the text.

To decide on the number of factors to retain, several statistical tests were employed including Akaike's Information Criterion, Schwarz's Bayesian Criterion, and Tucker and Lewis's Reliability Coefficient. In general, the best factor solution has been reached when the first two measures are at their minimum and the last is at its maximum. In this analysis, this point was reached at eight factors. When a nine-factor solution was tried, communalities exceeded 1.0, indicating a lack of fit, and further analysis could not be done.

To compute factor scores from the 8-factor solution, two approaches were used. One was to output the actual factor scores that the program computed from the factor analysis into another data set. This approach applied weightings to every item for each factor. The second approach was to select the items for each factor that loaded above .30 (see Table 4) and simply sum the responses to those items to obtain the factor score. Correlations between the two approaches ranged from .95 to .98 depending on the factor, indicating the

results obtained by the two methods were very similar. Because the second approach was simpler and more intuitively obvious, further analyses were conducted in this manner.

Analysis of Variance

The Statistical Analysis System (SAS) and the General Linear Models (GLM) Procedure were employed for this analysis. To begin, factor scores were standardized so that the mean was 0.0 and the standard deviation was 1.0 for each factor. Because a "1" or "strongly agree" was more positive than a "4" or strongly disagree, the result of this standardization process was that a negative number (e.g., -1.25) was more positive than a higher number (e.g., 1.3). Thus, the signs were switched to facilitate interpretation and positive numbers corresponded to positive signs.

The analysis proceeded by first testing for the hypothesis of no overall effect among the eight factors using a multivariate analysis of variance (MANOVA) and an alpha level of .05. If statistical significance was reached, then an analysis of variance (ANOVA) was performed for each factor using an alpha level of .01. If statistical significance was obtained, Tukey's Studentized Range (HSD) Test was employed to see which pairs of means were statistically significant at the .05 level. The difference between a pair of means was considered "educationally significant" if it was 0.5 or more.

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